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ABSTRACT

Among the 25 refereed papers, 14 refereed poster sessions, 17 invited papers, and 14 panel/workshop sessions are the following: "Forces Driving Change in Food Safety" (Foreman); "Are Two Incomes Needed to Get Ahead Today?" (Walden); "Financial Manager Profile Scale" (Lytton, Grable); "Real World Financial Management Tools and Practices" (Muske, Winter); "Personal Information Privacy Issues Relating to Consumption in the U.S. Marketplace" (Bonavia, Morton); "Shopping for a Credit Card" (Lee, Hogarth); "Debt Structure of Small Businesses Owned by Women in 1987 and 1993" (Haynes, Haynes); "Consumer Educators, Now Is the Time for a Paradigm Shift Toward Employee Financial Education" (Garman);"Studying Welfare Reform" (Fletcher et al.); "Work Efforts and Welfare Receipt by Poor Single Mothers" (Kim et al.); "Reinventing the Power Community" (Morrison); "Are You Able and Willing to Borrow?" (Yieh); "Do Households Make Saving and Investment Decisions Together?" (Chen et al.); "Price of Time for Informal Female Caregivers of the Elderly" (Torre, Kolodinsky); "Determinants of Defined Contribution Plan Employee Participation" (Grable et al.); "Consumer Acceptance of a New Product" (Eastwood); "Noncustodial Fathers Who Pay Supplemental Support for Their Children After Divorce" (Lown, Chandler); "Characteristic Philosophies of Families toward Time Resource Use" (Song);"Measures of Healthful Dietary Practices of College Students" (Denson); "PEP: Personal Economics for Preteens" (Shotick, Gordon); "Economics and Nutrition" (Huang); "Consumer Education in China" (Yin, Yin); "Rules for a Global Marketplace" (Asher et al.); "Information and Advertising Policy" (Ippolito); "Using Food Consumption Data to Estimate Dietary Exposure to Chemical Contaminants in Foods" (Kidwell, Tomerlin); "Consumer Adviser Certification Program in Korea" (Lee et al.); "Consumer Science in Korea" (Park); "Accredited Financial Planner in Korea" (Yoon, Sohn); "Consumer Movement Today" (Brobeck et al.); "Prevalence of Businesses Owned and Operated by Families" (Scannell, Heck); "Viable Model of Sustainable Family Businesses" (Stafford et al.); "Studying Family Businesses" (Fitzgerald, Winter); "Gathering and Inputing Data about

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the Family and Business" (Haynes, Danes); "Consumers and the Changing Health Care Environment: Policy Issues for Consumer Education and Research" (Rider); "Financial Education for Youth" (Olson, Dolan); and "Study Tour Courses Teach Consumer Issues and Policy" (Marlowe et al.). (YLB)

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March 25-28, 1998
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Irene E. Leech, Editor

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Irene E. Leech
Editor

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CONTENTS

Page
Author's List ... vii
Editor's Note ... xiv
Conference Chairs ... xv
ACCI Officers and Committees ... xvi

Invited Lecturers and Special Speakers

Esther Peterson Consumer Policy Forum

The Forces Driving Change in Food Safety ... 1
Carol Tucker Foreman

The Forces Driving Change in Food Safety, Comments ... 6
Bruce Silverglade

Refereed Papers

Are Two Incomes Needed to Get Ahead Today Evidence from the 1960s to the 1990s ... 8
Michael L. Walden

Financial Manager Profile Scale: An Initial Analysis ... 13
Ruth H. Lytton, John E. Grable

Real World Financial Management Tools and Practices ... 19
Glenn Muske, Mary Winter

Personal Information Privacy Issues: Relating to Consumption in the U.S. Marketplace ... 25
Marjorie I. Bonavia, Lois Wright Morton

Shopping for a Credit Card: Does Information Search Pay Off? ... 30
Jinkook Lee, Jeanne M. Hogarth

The Debt Structure of Small Businesses Owned by Women in 1987 and 1993 ... 36
George W. Haynes, Deborah C. Haynes

A National Comparison of Marijuana Use Between Rural and Urban Adolescents ... 42
Jane Kolodinsky, Lee Shirey

Consumer Educators, Now Is The Time For A Paradigm Shift Toward Employee Financial Education ... 48
E. Thomas Garman

Gye (financial club) Participation among Koreans ... 54
Gong-Soog Hong, Soon-Mi Kim

Risky Asset Holders in Korea: A Study of Institutional and Non institutional Risky Assets ... 60
JungSun Yang, Gong-Soog Hong

Pursuing the Harmony of Global and Local Policies on the Market Opening Based on a Korean Case ... 66
Seung Sin Lee, Kee Ok Kim

Studying Welfare Reform: Challenges and Opportunities ... 72
Cynthia Needles Fletcher, Mary Winter, Barbara J. Gaddis

4

Work Efforts and Welfare Receipt by Poor Single Mothers: The Impact on Children's Behavior Problems 78
Soo Yeon Kim, Barbara R. Rowe, Gong-Soog Hong

Reinventing the Power Community: Welfare Reform in the Cyber Economy 84
James L. Morrison

Are you Able and Willing to Borrow? 90
Kaili Yieh

Do Households Make Saving and Investment Decisions Together? 96
Peng Chen, Sherman Hanna, Catherine Montalto

The Price of Time for Informal Female Caregivers of the Elderly:A Comparison of Two Methodologies 102
Christine Torre, Jane Kolodinsky

Determinants of Defined Contribution Plan Employee Participation: A 403(b) Perspective 109
John E. Grable, Ruth H. Lytton, Constance Y. Kratzer

The Concept of Desired Wealth at Retirement 115
Charles B. Hatcher

Scanning Certification: the Pennsylvania Model 117
Drew Hyman, Holly Holcomb, Randy St. John, Jennifer Hawbaker

Consumer Acceptance of a New Product: A Case Study of Precut Carrots 123
David B. Eastwood

Noncustodial Fathers Who Pay Supplemental Support for their Children After Divorce 130
Jean M. Lown, Susan W. Chandler

Characteristic Philosophies of Families Toward Time Resource Use:
A Combined Factor and Cluster Method 136
John H. Song

Chinese Consumer Types: A Correspondence Analysis 142
Haifeng Li, Jing J. Xiao

Uncovering History: An examination of the impact of the Ebony Fashion Fair and Ebony magazine 148
J. Carlyne Wormley, Barbara Heinzerling, Virginia Gunn

Refereed Poster Session

Truth in Lending: What Constitutes Adequate Disclosure in Consumer Credit? 151
Paul L. Camp, Barbara R. Rowe

Relationship Between Nursing Home State Inspections and Consumer Satisfaction 152
Michael W. Collier, Frances C. Lawrence, M. E. Betsy Garrison, Pamela A. Monroe, E Barry Moser

Measures of Healthful Dietary Practices of College Students 153
Carol R. Denson

Choices that Make Change: A Collaborative Effort between Utility Company and Extension 154
Annett T. FitzGerald

Assessing the Causal Relationships Among Materialism, Reference Group, and Conspicuous Consumption of Korean Adolescents 155
Jeong Sook Kim

The Attitudes and Behavior of Young Adults toward Credit 156
Joanne R. Collins, Sheila Mammen

Policy Web: Using the Internet for Policy Research in the Consumer Sciences 157
Kelly Shannon Manley, Anne Sweaney, Carol B. Meeks

Consumers' Views: Electricity in Botswana 158
Selinah Peters, Carole J. Makela

Beyond Assisted Living Facilities: What Factors Predict Consumer Planning? 159
Aimee D. Prawitz, Sharon DeVaney, Susan Bowers

Telemarketing Fraud in Gated Senior Living Community 160
Wendy Reiboldt, Ronald E. Vogel

PEP: Personal Economics for Preteens 161
Joyce Ann Shotick, Michael Gordon

Consumer Group, Consumer Friendly Media, and Consumer Complaints: Helping Limited-English-Speaking Population 162
Darcy Ting, Jing J. Xiao

Life Insurance and the Newly-Married Couple: A Pilot Study 163
Kristen C. Whitworth, Julia Marlowe

Average Versus Worst Case Projections of Retirement Portfolios 164
Yoonkyung Yuh, Sherman Hanna, Catherine Phillips Montalto

Invited Paper Session

Economics and Nutrition: A Successful Partnership 165
Chung L. Huang, Rodolfo M. Nayga, Jr., Carol S. Kramer-LeBlanc, P. Peter Basiotis, Eileen T. Kennedy

Consumer Education in China 168
Shijie Yin, Qingfei Yin

New Beginnings in a Venerable Country: The Indian Institute of Consumer Studies 172
Jajie Mandana, Robert R. Kerton

Rules for the Global Marketplace 176
Allan Asher, Kernaghan Webb, Robert Kerton, Marlene Futterman, Premavathy Seetharaman,

Data from the Continuing Survey of Food Intakes by Individuals for Policy Decisions 181
Lori G. Borrud, Mary Y. Hama, Alanna J. Moshfegh, Joseph D. Goldman,

The Use of CSFII Data by Food Manufacturers To Measure Food and Nutrient Intake 183
Ann M. Albertson

Information and Advertising Policy: A Study of Fat and Cholesterol Consumption 1977-90 184
Pauline M. Ippolito

Using Food Consumption Data To Estimate Dietary Exposure To Chemical Contaminants In Foods 185
Judith L. Kidwell, J. Robert Tomerlin

Consumer Adviser Certification Program In Korea 186
Seung Sin Lee, Kyungja Kim, Insook Song

Consumer Science in Korea: An Overview 187
Myung-hee Park

Accredited Financial Planner in Korea 189
Jung-Hai Yoon, Sanghee Sohn

The Consumer Movement Today: An Encyclopedic View 190
Stephen Brobeck, Robert N. Mayer, Robert O. Herrmann

The Prevalence of Businesses Owned and Operated by Families 194
Elizabeth Scannell, Ramona K. Z. Heck

A Viable Model of Sustainable Family Businesses 195
Kathryn Stafford, Karen Duncan, Virginia Zuiker, Alma J. Owen

Studying Family Businesses 196
Margaret A. Fitzgerald, Mary Winter

Gathering and Imputing Data about the Family and Business 198
George W. Haynes, Sharon Danes

Cigarette Smoking by Children in Developing Countries: A Problem Whose Time Has Come?
Friedman, Monroe 234

Panel and Workshop Sessions

Consumers and the Changing Health Care Environment: Policy Issues for Consumer Education and Research 199
Mary Ellen Rider

Target Markets for Technology Fraud: Who is Vulerable? 203
Joan L. Kinney, Karen P. Goebel

The Hidden Costs of Informal Caregiving: An International Comparison 206
Janet E. Fast, Gong-Soog Hong, Jane Kolodinsky

Consumer Input in Establishing a Framework of Consumer Protection to Enhance Fair Trading and Equity in the Global Market Place 210
Andrea Lazzarini, Bernard Sihanya, Cem Kaner, Sothi Rachaagan

Financial Education for Youth 211
Pamela N. Olson, Elizabeth Dolan

Study-Tour Courses Teach Consumer Issues & Policy 214
Julia Marlowe, Teresa Mauldin, Charles Hatcher, Anne Sweaney, Carol Meeks, Martin Coppack

Consumer Expenditure Survey Showcase: Give Me Your Retired, Your Hungry, Your Poor 217
Jessie X. Fan, Geoffrey D. Paulin, Michael Walden, W. Keith Bryant

Characteristics and Spending Patterns of the Poor and Nonpoor 218
Deanna L. Sharpe, Mohamed Abdel-Ghany

Average Versus Worst Case Projections of Retirement Portfolios 219
Chandrika Jayathirtha, Sherman Hanna

From the Melting Pot to the Stew Pot: A Study of Inter-Ethnic Variation in Food Expenditures 220
Geoffrey D. Paulin

Planning for Retirement: A Comparison Across Generations 221
Brian Riordon

The Effect of International Trade Agreements on the Consumer 222
Bruce Silverglade

The Measurement of Household Wealth using Survey Data: An Overview of the Survey of Consumer Finances 224
Gerhard Fries, Martha Starr-McCluer, Annika E. Sundén

Practical Issues and Challenges from the Users' Perspective 232
Catherine P. Montalto

AUTHOR INDEX TO THE 1998 CONSUMER INTERESTS ANNUAL

AUTHOR	TITLE	PAGE
Abdel-Ghany, Mohamed	See Sharpe, Deanna L.	218
Albertson, Ann M.	The Use of CSFII Data by Food Manufacturers To Measure Food and Nutrient Intake	183
Asher, Allan	Rules for the Global Marketplace	176
Basiotis, P. Peter	See Huang, Chung L.	165
Bonavia, Marjorie I.	Personal Information Privacy Issues: Relating to Consumption in the U.S. Marketplace	25
Borrud, Lori G.	Data from the Continuing Survey of Food Intakes by Individuals for Policy Decisions	181
Bowers, Susan	See Prawitz, Aimee D.	159
Brobeck, Stephen	The Consumer Movement Today: An Encyclopedic View	190
Bryant, W. Keith	See Fan, Jessie X.	217
Camp, Paul L.	Truth in Lending: What Constitutes Adequate Disclosure in Consumer Credit?	151
Chandler, Susan W.	See Lown, Jean M.	130
Chen, Peng	Do Households Make Saving and Investment Decisions Together?	96
Collier, Michael W.	Relationship Between Nu rsing Home State Inspections and Consumer Satisfaction	152
Collins, Joanne R.	The Attitudes and Behavior of Young Adults toward Credit	156
Coppack, Martin .	See Marlowe, Julia	214
Danes, Sharon	See Haynes, George W.	198
Denson, Carol R.	Measures of Healthful Dietary Practices of College Students.	153
DeVaney, Sharon	See Prawitz, Aimee D.	159
Dolan, Elizabeth	See Olson, Pamela N.	211
Duncan, Karen	See Stafford, Kathryn	195
Eastwood, David B.	Consumer Acceptance of a New Product: A Case Study of Precut Carrots	123
Fan, Jessie X.	Consumer Expenditure Survey Showcase: Give Me Your Retired, Your Hungry, Your Poor....	217

AUTHOR	TITLE	PAGE
Fast, Janet E.	The Hidden Costs of Informal Caregiving: An International Comparison	206
FitzGerald, Annett T.	Choices that Make Change: A Collaborative Effort between Utility Company and Extension	154
Fitzgerald, Margaret A.	Studying Family Businesses	196
Fletcher, Cynthia Needles	Studying Welfare Reform: Challenges and Opportunities	72
Foreman, Carol Tucker	The Forces Driving Change in Food Safety	1
Friedman, Monroe	Cigarette Smoking by Children in Developing Countries: A Problem Whose Time Has Come?	234
Fries, Gerhard	The Measurement of Household Wealth using Survey Data: An Overview of the Survey of Consumer Finances	224
Futterman, Marlene	See Asher, Allan	176
Gaddis, Barbara J.	See Fletcher, Cynthia Needles	72
Garman, E. Thomas	Consumer Educators, Now Is The Time For A Paradigm Shift Toward Employee Financial Education	48
Garrison, M. E. Betsy	See Collier, Michael W.	152
Goebel, Karen P.	See Kinney, Joan L.	203
Goldman, Joseph D.	See Borrud, Lori G.	181
Gordon, Michael	See Shotick, Joyce Ann	161
Grable, John E.	Determinants of Defined Contribution Plan Employee Participation: A 403(b) Perspective	109
Grable, John E.	See Lytton, Ruth H.	13
Gunn, Virginia	See Wormley, J. Carlyne	138
Hama, Mary Y.	See Borrud, Lori G.	181
Hanna Sherman	See Chen, Peng	96
Hanna, Sherman	See Yuh, Yoonkyung	164
Hanna, Sherman	See Jayathirtha, Chandrika	219
Hatcher, Charles B	The Concept of Desired Wealth at Retirement	115
Hatcher, Charles	See Marlowe, Julia	214
Hawbaker, Jennifer	See Hyman, Drew	117

AUTHOR	TITLE	PAGE
Haynes, Deborah C.	See Haynes, George W.	36
Haynes, George W.	The Debt Structure of Small Businesses Owned by Women in 1987 and 1993	36
Haynes, George W.	Gathering and Imputing Data about the Family and Business	198
Heck, Ramona K. Z.	See Scannell, Elizabeth	194
Heinzerling, Barbara	See Wormley, J. Carlyne	148
Herrmann, Robert O.	See Brobeck, Stephen	190
Hogarth, Jeanne M.	See Lee, Jinkook	30
Holcomb, Holly Holcomb	See Hyman, Drew	117
Hong, Gong-Soog	Gye (financial club) Participation among Koreans	54
Hong, Gong-Soog	See Yang, JungSun	60
Hong, Gong-Soog	See Kim, Soo Yeon	78
Hong, Gong-Soog	See Fast, Janet E	206
Huang, Chung L.	Economics and Nutrition: A Successful Partnership	165
Hyman, Drew	Scanning Certification: the Pennsylvania Model	117
Ippolito, Pauline M.	Information and Advertising Policy: A Study of Fat and Cholesterol Consumption 1977-90	184
Jayathirtha, Chandrika	Average Versus Worst Case Projections of Retirement Portfolios	219
John, Randy St.	See Hyman, Drew	117
Kaner, Cem	See Lazzarini, Andrea	210
Kennedy, Eileen T.	See Huang, Chung L.	165
Kerton, Robert R.	See Mandana, Jajie	172
Kerton, Robert	See Asher, Allan	176
Kidwell, Judith L.	Using Food Consumption Data To Estimate Dietary Exposure To Chemical Contaminants In Foods	185
Kim, Jeong Sook	Assessing the Causal Relationships Among Materialism, Reference Group, and Conspicuous Consumption of Korean Adolescents	155
Kim, Kee Ok	See Lee, Seung Sin	66
Kim, Kyungja	See Lee, Seung Sin	186

AUTHOR	TITLE	PAGE
Kim, Soo Yeon	Work Efforts and Welfare Receipt by Poor Single Mothers: The Impact on Children's Behavior Problems	78
Kim, Soon-Mi	See Hong, Gong-Soog	54
Kinney, Joan L.	Target Markets for Technology Fraud: Who is Vulerable?	203
Kolodinsky, Jane	A National Comparison of Marijuana Use Between Rural and Urban Adolescents	42
Kolodinsky, Jane	See Torre, Christine	102
Kolondinsky, Jane	See Fast, Janet E	206
Kramer-LeBlanc, Carol S.	See Huang, Chung L.	165
Kratzer, Constance Y.	See Grable, John E.	109
Lawrence, Frances C.	See Collier, Michael W.	152
Lazzarini, Andrea	Consumer Input in Establishing a Framework of Consumer Protection to Enhance Fair Trading and Equity in the Global Market Place	210
Lee, Jinkook	Shopping for a Credit Card: Does Information Search Pay Off?	30
Lee, Seung Sin	Pursuing the Harmony of Global and Local Policies on the Market Opening Based on a Korean Case	66
Lee, Seung Sin	Consumer Adviser Certification Program In Korea	186
Li, Haifeng	Chinese Consumer Types: A Correspondence Analysis	142
Lown, Jean M.	Noncustodial Fathers Who Pay Supplemental Support for their Children After Divorce	130
Lytton, Ruth H.	Financial Manager Profile Scale: An Initial Analysis	13
Lytton, Ruth H.	See Grable, John, E.	109
Makela, Carole J.	See Peters, Selinah	158
Mammen, Sheila	See Collins, Joanne R.	156
Mandana, Jajie	New Beginnings in a Venerable Country: The Indian Institute of Consumer Studies	172
Manley, Kelly Shannon	Policy Web: Using the Internet for Policy Research in the Consumer Sciences	157
Marlowe, Julia	Study-Tour Courses Teach Consumer Issues & Policy	214
Marlowe, Julia	See Whitworth, Kristen C.	163
Mauldin, Teresa	See Marlowe, Julia	214

AUTHOR	TITLE	PAGE
Mayer, Robert N.	See Brobeck, Stephen	190
Meeks, Carol B.	See Manley, Kelly Shannon	157
Meeks, Carol	See Marlowe, Julia	214
Monroe, Pamela A.	See Collier, Michael W.	152
Montalto, Catherine P.	Practical Issues and Challenges from the Users' Perspective	232
Montalto, Catherine P.	See Chen, Peng	96
Montalto, Catherine Phillips	See Yuh, Yoonkyung	164
Morrison, James L.	Reinventing the Power Community: Welfare Reform in the Cyber Economy	84
Morton, Lois Wright	See Bonavia, Marjorie I.	25
Moser, E Barry	See Collier, Michael W.	152
Moshfegh, Alanna J.	See Borrud, Lori G.	181
Muske, Glenn	Real World Financial Management Tools and Practices	19
Nayga, Rodolfo M. Jr.	See Huang, Chung L.	165
Olson, Pamela N.	Financial Education for Youth	211
Owen, Alma J.	See Stafford, Kathryn	195
Park, Myung-hee	Consumer Science in Korea: An Overview	187
Paulin, Geoffrey D.	From the Melting Pot to the Stew Pot: A Study of Inter-Ethnic Variation in Food Expenditures	220
Paulin, Geoffrey D.	See Fan, Jessie X.	217
Peters, Selinah	Consumers' Views: Electricity in Botswana	158
Prawitz, Aimee D.	Beyond Assisted Living Facilities: What Factors Predict Consumer Planning?	159
Rachaagan, Sothi	See Lazzarini, Andrea	210
Reiboldt, Wendy	Telemarketing Fraud in Gated Senior Living Community	160
Rider, Mary Ellen	Consumers and the Changing Health Care Environment: Policy Issues for Consumer Education and Research	199
Riordon, Brian	Planning for Retirement: A Comparison Across Generations	221
Rowe, Barbara R.	See Kim, Soo Yeon	78

AUTHOR	TITLE	PAGE
Rowe, Barbara R.	See Camp, Paul L.	151
Scannell, Elizabeth	The Prevalence of Businesses Owned and Operated by Families	194
Seetharaman, Premavathy	See Asher, Allan	176
Sharpe, Deanna L.	Characteristics and Spending Patterns of the Poor and Nonpoor	218
Shirey, Lee	See Kolodinsky, Jane	42
Shotick, Joyce Ann	PEP: Personal Economics for Preteens	161
Sihanya, Bernard	See Lazzarini, Andrea	210
Silverglade, Bruce	The Forces Driving Change in Food Safety, Comments	6
Silverglade, Bruce	The Effect of International Trade Agreements on the Consumer	222
Sohn, Sanghee	See Yoon, Jung-Hai	189
Song, Insook	See Lee, Seung Sin	186
Song, John H.	Characteristic Philosophies of Families Toward Time Resource Use: A Combined Factor and Cluster Method	136
Stafford, Kathryn	A Viable Model of Sustainable Family Businesses	195
Starr-McCluer, Martha	See Fries, Gerhard	224
Sundén, Annika E.	See Fries, Gerhard	224
Sweaney, Anne	See Manley, Kelly Shannon	157
Sweaney, Anne	See Marlowe, Julia	214
Ting, Darcy	Consumer Group, Consumer Friendly Media, and Consumer Complaints: Helping Limited-English-Speaking Population	162
Tomerlin, J. Robert	See Kidwell, Judith L.	185
Torre, Christine	The Price of Time for Informal Female Caregivers of the Elderly:A Comparison of Two Methodologies	102
Vogel, Ronald E.	See Reiboldt, Wendy	160
Walden, Michael L.	Are Two Incomes Needed to Get Ahead Today Evidence from the 1960s to the 1990s	8
Walden, Michael L.	See Fan, Jessie X.	217
Webb, Kernaghan	See Asher, Allan	176
Whitworth, Kristen C.	Life Insurance and the Newly-Married Couple: A Pilot Study	163
Winter, Mary	See Muske, Glenn	19

AUTHOR	TITLE	PAGE
Winter, Mary	See Fletcher, Cynthia Needles	72
Winter, Mary	See Fitzgerald, Margaret A.	196
Wormley, J. Carlyne	Uncovering History: An examination of the impact of the Ebony Fashion Fair and Ebony magazine	148
Xiao, Jing J.	See Li, Haifeng	142
Xiao, Jing J.	See Ting, Darcy	162
Yang, JungSun	Risky Asset Holders in Korea: A Study of Institutional and Non institutional Risky Assets	60
Yieh, Kaili	Are you Able and Willing to Borrow?	90
Yin, Qingfei	See Yin, Shijie	168
Yin, Shijie	Consumer Education in China	168
Yoon, Jung-Hai	Accredited Financial Planner in Korea	189
Yuh, Yoonkyung	Average Versus Worst Case Projections of Retirement Portfolios	164
Zuiker, Virginia	See Stafford, Kathryn	195

FROM THE EDITOR

The 44th Annual Conference of the American Council on Consumer Interests was held in Washington, DC March 25-28, 1998. Allan Asher presented the Colston Warne Lecture "Going Global: A New Paradigm for Consumer Protection. Carol Tucker Foreman made the Esther Peterson Consumer Policy Forum memorable with "The Forces Driving Change in Food Safety." No one who attended the conference will forget Rob Mayer's Tribute to Esther Peterson.

These proceedings reflect the outstanding program organized by Margaret Charters and her committee. Presenters and authors from around the globe contributed to this work. Unfortunately all sessions are not reflected in the Proceedings, some because of the nature of the session, others because presenters did not submit manuscripts. There are many aspects of a meeting which cannot be reflected in a written document.

Special thanks to So-Hyun Joo, who spent many hours adjusting the formatting on papers, especially assuring that the various reference styles used by authors were in proper APA format. Her computer expertise, and especially with Word, was invaluable to this project. Additionally, she kept everything organized and worked diligently and quickly to assure that the Proceedings were out in a reasonable length of time.

The call for papers for the 45th conference is already out. Plan now to join your colleagues in these pages next year by submitting a paper or session!

Irene E. Leech
Virginia Tech

1998 ANNUAL ACCI CONFERENCE

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Graduate Student Session: David B. Eastwood, university of Tennessee
Consumer Interests Annual Editor: Irene E. Leech, Virginia Tech

PAPER AND POSTER REVIEWERS

Thanks to the following people who so generously served as reviewers for the refereed papers and posters presented at this conference.

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W. Keieth Bryant, Cornell University
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17

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The Forces Driving Change in Food Safety

An invited presentation at the Esther Peterson Consumer Policy Forum, 44th Annual Conference, American Council on Consumer Interests, Georgetown University, Washington, D.C., March 28, 1998.

Carol Tucker Foreman, Safe Food Coalition[1]

I am pleased and honored to be invited to participate in the Esther Peterson Consumer Policy Forum. I met Esther 35 years ago. I was teaching at a small women's college in the middle of Missouri and learned that the Assistant Secretary of Labor Esther Peterson, was coming to make a speech in nearby Jefferson City. I was new to teaching, distressed at my students lack of interest in careers, government, politics or, seemingly, anything except finding a husband, and eager to get them interested in the world beyond the local fraternity houses. What better way than a stirring speech by the highest-ranking woman in the Kennedy Administration. I called the Department of Labor and asked if the assistant secretary would consider a little side trip to speak at my college and inspire some young women. The yes came back within hours.

I insisted the entire student body be gathered in assembly to hear this honored guest. Esther took the stage and spent ten minutes talking about her husband and children. She had not gotten my message. Then, suddenly, sensing that she had reached an appropriate comfort point, Esther shifted tone and subject, leaned into the podium, and delivered a stirring appeal for better working conditions and wages for women. By the end, we were all dazzled.

A year later, I was in California working on the Johnson/Humphrey presidential campaign and learned Esther was coming to spend a day campaigning in Los Angeles. I immediately claimed to be her dear friend and wangled the assignment of being her escort for the day. It was wonderful for me to watch her work the same charm on one group after another, starting slow, letting them get to know her, figuring them out, and then capturing their hearts, minds and votes.

When I returned to Washington the next year, Esther had become President Johnson's consumer affairs adviser. I wanted to work for her. So did thousands of other people and she had almost no staff. In 1967 I learned that Esther was forming Consumer Federation of America. A friend of mine was approached about being executive director and I told her -- if you don't want that job, recommend me, I want to work with Esther Peterson. I didn't get the job that time either. Another six years passed before I was hired by CFA and had the opportunity to really watch Esther at work. She was a terrific teacher.

Esther would have been particularly pleased at the theme of this year's conference, Global Policy: Local Issues. She was an actor in the global marketplace, working for the International Organization of Consumers Unions, fighting to keep unsafe products, banned in the country of manufacture, from being exported to developing nations.

But Esther always understood that, in the end, all policy and politics are local. As she did with my college students, Esther had the ability to connect on the most personal level with the people she worked with, worked for, and worked on. Washington, D.C. shoppers who had never been closer to Esther than a Giant Food poster or television commercial nevertheless *knew*-- and would tell you-- that Esther *cared* about them and would represent *their* interests. Esther wanted to know how the policy options in the briefing paper affected people.

ACCI has come to Washington at a time when change is the dominant characteristic of food safety policy. After remaining virtually the same for most of the last century, the basic concept of food inspection is changing and the structure of the federal food safety apparatus may follow soon. To understand the change, why it is happening now and why it took so long to come to pass, it is necessary to do examine some of the social, technical and political factors that are influencing this period of change.

Food policy debates are always especially interesting because we have such an immediate and intensely personal connection with our food supply. Every day, three times a day, we have to choose, for our families, and ourselves what to buy and eat.

We eat to sustain life and health. But all too often our food ends up poisoning us. Food-borne illnesses strike between six million and 80 million Americans each year and kill up to 9,000. They cost our nation as much as

$5 billion in health care costs and lost wages annually. The personal toll of illness and death is incalculable. Yet, until recently, neither government nor industry devoted much time, attention, or resources to combating the problem.

Societal changes are major contributors to food-borne illness.

- Changes in the way food is grown, processed and shipped. Our food is mass produced, shipped long distances, processed and reprocessed.
- Changes in demography. We are an aging population, living with chronic diseases. Thanks to advancing science, more of us live longer periods of time with compromised immune systems.
- Changes in life styles. Women used to stay home and cook pot roast. They cooked it all day long--nothing survived, including the flavor. Today, 40 cents of every food dollar is spent on food eaten away from home. With most Americans working outside the home, we rely on restaurants and carry-outs and the deli counter at the supermarket. Every time food is handled, there is an opportunity for disease causing bacteria to be introduced or to multiply to a critical point.
- Changes in the type of food we eat. Because research shows that a diet with abundant fresh fruits and vegetables may bring health benefits, these products have acquired new popularity. But uncooked food is more likely to harbor pathogens.
- Changes in the source of our food. We eat from a global plate. We can have fresh tomatoes, melons and berries in February. They often come from countries where the water and sanitary facilities are scarce. And we may get a dose of interesting and unusual pathogens along with them.
- Even the pathogens are changing. Bacteria were here before us and they'll be here after we're gone. They continue to evolve, constantly challenging existing knowledge and containment efforts. When I left USDA in 1981, we had not yet discovered that *campylobacter jejuni, listeria monocytogenes, E.coli* O157:H7, and *salmonella enteriditis* were human pathogens. In fact, some of them probably didn't even exist. Today, they cause millions of illnesses each year. Over reliance on antibiotics in human health and animal agriculture is generating new, antibiotic resistant bacteria.

All these changes have created a serious public health problem. Now, after far too long, government and industry are responding. After years of ignoring, even denying the problem, government and industry are attacking food-borne illness vigorously and, I think, effectively.

The Transformation in Federal Food Safety Programs

In January 1997, President Clinton announced the creation of a federal Food Safety Initiative to fight food-borne illness. The initiative includes: expansion of the federal food safety surveillance system, improved coordination between Federal, state and local health authorities, improved risk assessment capabilities, increased food inspections, expanded research, consumer education and strategic planning. Congress voted an increase of $43 million in this fiscal year to support the program and the President has now requested another $101 million increase this year.

This, I can assure you, is a major change. FDA's food inspection programs have been hampered by a severe lack of resources. There has been insufficient cooperation between FDA and the Food Safety and Inspection Service of USDA.

In January 1998, the Department of Agriculture launched a completely new approach to meat and poultry inspection. The Pathogen Reduction Hazard Analysis and Critical Control Point Program represented a paradigm shift in the approach to federal food safety regulation. Each plant must take responsibility for preventing contamination and must test raw product to show that it does not have excessive amounts of fecal bacteria. The USDA has set limits on the amount of salmonella in products and will conduct regular tests to make sure salmonella counts remain below the federally established maximum. The change is the equivalent of moving from the quill pen to a modern laptop computer.

From its inception in 1906, the meat inspection program has relied upon federal employees to assure that the meat coming out of an inspected plant was wholesome. Every animal was examined before slaughter; every bird and animal carcass was examined after slaughter. Inspectors look for filth or signs of disease, and watched sausage and pizza being made.

Under the old organoleptic system, it was the inspector's responsibility --often only the inspector's--to stop bad meat from leaving a plant. The tools he used were his eyes, fingers and nose -- to peer, poke and sniff. Unfortunately, you can't see, feel or smell pathogenic bacteria.

The most extraordinary thing about the old meat and poultry inspection system is that none of the 5,000 inspectors ever tested any raw meat or poultry product for the presence of harmful bacteria. It was USDA's official position that bacteria are natural constituents of raw meat and poultry, not an adulterant.

Why Has the Change Taken So Long?

The increase in food poisoning started back in the early 1980's. Many lives could have been saved if action had been taken sooner. USDA, instead, actively opposed microbial testing. Government was slow to act because:

- USDA has traditionally seen its role as advocate for industry, not protector of public health. Throughout the 1980's, former executives of the meat and poultry industries held high positions within the Department, including Secretary, Deputy Secretary and Assistant Secretary in charge of inspection. This important public health program was merely a tool to sell more meat.

The inspection agency according to the National Academy of Sciences isolated itself from the rest of the scientific and public health community and viewed the industry as its peer group. In 1989, there was a major food poisoning incident among school children in Minnesota that was almost surely *E. coli* O157:H7. According to a Pulitzer-prize winning series published in the *Kansas City Star* in December 1991, the department decided not to recall the meat. They wouldn't even test it for the deadly bacteria that had already killed four persons

- In Congress, jurisdiction over meat and poultry inspection resides in the Agriculture Committees. Members choose these committees because they have a constituent interest in production agriculture, not in order to protect public health.

The permanent Secretary of Agriculture, Rep. Jamie Whitten served as chairman of the House Appropriations Committee Subcommittee on Agriculture, which also controlled the budget of the FDA for 44 years. He was a friend of the poultry industry and he liked inspection just the way it was -- it's no surprise that in Washington, DC, the USDA's main administration building is now named after him.

- The regulated industries are a constant and large source of campaign contributions to key agriculture committee members and congressional leadership. From 1987 to 1996, the meat and poultry industry contributed more than $9 million in and the entire food industry contributed $41 million to members of both parties.

How Did the Change Take Place?

What finally tilted the balance in favor of change? The West Coast outbreak of *E. coli* O157:H7 in 1993 was the catalyst.

First, the pathogen involved was virulent and the illnesses dramatic. Hemolytic Uremic Syndrome was more than just a belly ache. Children died terrible deaths from progressive organ failure. Subsequent outbreaks followed and it was clear that the organism is not rare.

Second, a new and activist Administration was just taking office. After 12 years of Republican rule. The new Secretary of Agriculture, a black congressman from Mississippi, was a bright, young politician on his way up. The Vice President was a student of food safety issues.

Perhaps most importantly, the president was a master of the human touch and adroit use of media. Informed of the Seattle outbreak, he immediately sent the Secretary of to Seattle. By contrast, in 1987, when a shipment of tainted beef killed four patients and hospitalized fifty other residents at two Utah mental institutions, the USDA did nothing.

However, the Clinton Administration was tied to the same industry forces that had run the Department for years. Clinton and the Secretary had to choose between consumer groups urging a new inspection team and industry and congressional support for the existing group. The old team stayed. Poultry industry leaders also opposed efforts to move inspection from the marketing area of USDA to the jurisdiction of consumer advocate Ellen Haas. Further, when the Administration and Congress put together a bill to reorganize the USDA, they left inspection within the purview of marketing.

The Administration began to back up its early commitment to change only after victims groups began to tell their stories on television and after the news media began to suggest inappropriate financial ties between the Agriculture Secretary and Tyson Foods. But I'll get back to that later.

A third factor in this budding revolution was major change on Capitol Hill. In January 1993, a bright, ambitious young lawyer from Illinois, Dick Durbin, replaced Rep. Jamie Whitten. Durban's first act in Congress was to introduce legislation banning smoking on airplanes. He succeeded. Durbin, now a Senator, had worked in a meat packing plant while going to school.

In 1995, the Republicans took over the Congress. They were joined at the hip with the food industry and their regulatory reform agenda would have shut down inspection changes.

In the spring of 1995, as Senator Bob Dole was traveling to New Hampshire to campaign for president, regulatory reform opponents ran a television commercial featuring a young mother from Kansas whose child had contracted HUS from undercooked hamburger. She charged that Dole's regulatory reform bill would stop USDA's efforts to reform inspection and reduce food-borne illness. Dole's enthusiasm for regulatory reform waned.

Fourth, the outbreaks of food poisoning coincided with a massive increase in the number of television news magazines on the air and the increase in total time devoted to news. NBC's Dateline was born and began to appear three times weekly. CNBC and MSNBC and other cable outlets were launched and had to fill the hours. The victims of food poisoning made a dramatic case for change. Even more importantly, television reporters managed to get secret cameras into packing houses. They came out with tape of filthy plants and carcasses being dragged across dirty floors. Meat slaughter is not a pretty sight under any circumstances.

Fifth, there were the victims' families who took up reform as a crusade. The families and friends of E. colis victims organized and told their stories to both public officials and the media. They studied the problems of the system. They became experts on food-borne illness and USDA's inspection system. They couldn't be dismissed as just another special interest because they did indeed have a very special interest. Their moral authority overwhelmed the industry.

Unlike many citizen groups that arise from some cataclysmic event, they did not fall victim to infighting and were not seduced by special interests that would have redirected their efforts. They wanted meat inspection reformed and they were not deterred.

Finally, there was politics. In an era of poll driven policy, the STOP activists were well placed to make their case. The activists had not only knowledge, and moral authority, but also timing. Most of the STOP activists were women, mothers of young children who died. They emerged on the scene just in time to meet an important political change.

Bill Clinton was elected president by carrying large majority of votes of non-college educated, younger women -- the so-called soccer moms. After the health reform fiasco of 1994, the soccer moms stayed home and did not go to the polls in that November. Republicans took the Congress, and Clinton was declared politically dead two years into his first term. But the polling numbers -- both generally and for the President -- indicated that food safety and the stories of the E. coli victims were powerful politics for the President. He signed the HACCP regulation n the White House on a Saturday, surrounded by victims families.

At the 1996 Democratic Convention, Senator Barbara Boxer, in a major address, used video tape of STOP member Rainier Mueller talking about his son's death. The war on food-borne illness is powerful politics. It contributed to the President's re-election.

And it is not surprising that last year, opponents of the President's fast track legislation rallied support from STOP and victims of food poisoning traced to imported produce to help defeat that legislation.

The Problems Ahead

The fight for meat and poultry safety has been an extraordinary story. But it isn't complete yet. The new meat and poultry inspection system is in place in the 300 largest plants, but will not be implemented through the industry for another two years. There are dangers ahead:

- Many in the industry want to drop microbial testing -- or hang so many burdens on the new system that it will fail.
- Small businesses, not yet under the new program, are politically powerful and will try to secure exemptions for themselves.
- Inspectors are threatened and their elected leaders are charging that the new system is an industry honor system When the inevitable food poisoning incident finally comes, they'll demand we go back to the old ways.
- Hundreds of reporters are waiting eagerly to write the first, new system fails article.

So, like that laptop computer I mentioned earlier, the new attack on food-borne illness has weaknesses. There is a multitude of opportunities for the system to crash. True reform is more than just change. It never comes easily. And it must be sustained by continued attention, support and even further reform.

Endnotes

1. Carol Tucker Foreman is founder and coordinator of the Safe Food Coalition, an alliance of public interest groups that led the successful ten-year campaign to reform the nation's meat, poultry and seafood inspection laws. As Assistant Secretary of Agriculture for Food and Consumer Services, 1977-81, Mrs. Foreman administered the nation's meat and poultry safety programs. She is president of Foreman Heidepriem & Mager Inc., a Washington, D.C. public policy consulting firm.

The Forces Driving Change in Food Safety, Comments

An invited presentation at the Annual Conference of the American Council on Consumer Interests. Comments are a reaction to the presentation of Carol Tucker Foreman's address at the Esther Peterson Consumer Policy Forum.

Bruce Silverglade, Center for Science in the Public Interest[1]

The title of this year's conference, and I think we can all agree that it has been an excellent conference, is "Global Policy: Local Issues." Carol Foreman has just described to you several ways in which global policy is affecting us in one very important area -- the food we depend on for life sustaining nourishment. I would like to make a few additional points on this subject and provide some closing observations regarding global policy and consumer protection.

International food marketers can have a hard time selling overseas. In fact, a lot can be lost in the translation of even the name of a product. As *Newsweek* magazine reported, some brands sold over there just wouldn't make it over here. Take for example the brand of Italian Yogurt called "Mukk," -- not very appetizing. The makers of the Japanese soft drink called "Sweat" may face similar marketing problems. Then, there is the French breakfast cereal called "Craspy Fruit," or the popular brand of Portuguese Tuna called "Atum Bom."

As you can see, food companies can face great difficulties selling their products overseas. Governments, however, are trying to make it easier on manufacturers by supporting free trade agreements that call for international standards setting and harmonization. While brand names may always lose something in the translation, attempts to internationally harmonize government standards for food additives, pesticides, contaminants, vitamin and mineral content, and even labeling requirements are being made in order to facilitate trade.

Since 1994, the U.S. has been bound by an international agreement called the Agreement on the Application of Sanitary and Phytosanitary Measures, commonly referred to as the "SPS Agreement." The thrust of the SPS Agreement in the area of food regulation is to encourage nations to support the development of international food safety and labeling standards and to adopt those standards as domestic requirements in order to ease the flow of food products across borders. The SPS Agreement designates the Codex Alimentarius Commission (Codex), a subsidiary body of the United Nations' Food and Agriculture Organization and World Health Organization, as one of the primary sources of recognized international food standards. Domestic regulatory requirements that are based on Codex standards are presumed to be consistent with the SPS Agreement. Regulatory requirements that exceed Codex standards, however, may be challenged as trade barriers. In such cases, a complaint can be brought before the World Trade Organization (WTO), which decides whether health and safety regulations that exceed Codex standards are scientifically justified or constitute an illegal trade barrier. Member nations must abide by the WTO's decision or face trade sanctions.

Codex standards have therefore assumed a new importance since any regulation issued by the Food and Drug Administration (FDA) and the U.S. Department of Agriculture (USDA) that exceeds them can be challenged as a trade barrier. In recognition of the new global regulatory framework, the FDA has asked for public comment on how and when the agency should adopt Codex standards as U.S. regulatory requirements.

To the extent that international harmonization of regulatory requirements elevates health and safety regulations to a consistent level of excellence, consumers worldwide are well served. However, if harmonization tends to reduce standards to a lower common denominator, then consumer health and safety may be jeopardized regardless of the economic benefits brought by increased trade.

And so we have to ask ourselves the question: what is the true price of free trade?

CSPI is concerned that the answer to this question has not been adequately researched. For example, we need to determine if the SPS Agreement is resulting in "downward harmonization" of health and safety standards and, if so, what will the impact be on the American consumer?

In the last year, the U.S. has repeatedly failed in persuading Codex to adopt positions favored by the Administration. For example, Codex has adopted, or advanced over strenuous objections by the U.S., standards and guidelines sanctioning:

- Inspection systems operated by company employees rather than by government-paid officials;
- Nutrient content claims not permitted by FDA food labeling regulations;

- Food additives not approved by FDA; and
- Levels of lead in fruit juices, milk, and other foods consumed by children that exceed U.S. standards.

These standards will carry a presumption of validity in trade disputes, and it may be just a matter of time before the U.S. government must decide whether to accept imports of these products or face trade sanctions. Ultimately, we fear that Congress and the Administration may capitulate and accept imports of food products currently not permitted to be sold here in deference to the interests of U.S. agricultural exporters who do not want to see the U.S. government rock the boat and suffer retaliatory trade measures from abroad. Worse yet, domestic producers may then argue, not unreasonably, that FDA and USDA regulatory requirements should be lowered to similar levels so as to not discriminate against domestic producers. What will be the impact on consumers? We really don't know. What will be the true price of free trade? That is yet to be determined.

Fortunately, the SPS agreement is up for review this year by member nations. Negotiators from around the world have scheduled a series of four meetings in Geneva to decide whether the agreement should be modified. The U.S. food industry believes that the SPS agreement helps compel other nations to accept U.S. agricultural exports and does not want to see the agreement changed. But in light of the problems that are occurring with Codex, we believe that the U.S. should support amendments to the SPS Agreement, and we urge those active in the consumer movement to join with us. The global economy is here to stay, and there is little question that regulatory requirements will be harmonized internationally. However, the question remains as to whether harmonization will lead to an upgrading of health standards to world class levels or the downgrading of standards to the lowest common denominator.

In the past year, CSPI has committed itself to becoming active on international issues that affect domestic consumer laws and regulations. As part of this effort, we have successfully petitioned the Codex Alimentarius for recognition so that we will be able to participate in international proceedings. We have formed a coalition with consumer groups overseas called the International Association of Food and Consumer Organizations, which we intend to work with on global issues. We are developing an international media list. We have opened an office in Canada.

I encourage each of you to expand your efforts internationally as well. If I can leave you with just one thought, it is that the American consumer community must become active on a global level. This is no longer just work for international affairs specialists, but rather for each of us to integrate into our everyday activities as consumer advocates and researchers. By working together, we can help determine the true price of free trade and ensure that our common mission to advance the consumer's interest is fulfilled.

Endnotes

1. Director of Legal Affairs.

Are Two Incomes Needed to Get Ahead Today?: Evidence from the 1960s to the 1990s

Data from the Consumer Expenditure Surveys and the Panel Study of Income Dynamics are used to examine changes in real after-tax incomes of single earner and dual earner households from the 1960s to the 1990s. The findings indicate that dual earner households experienced significant real income gains, whereas many single earner households suffered income losses since 1972. Work hours and occupation account for much of the differences in household income trends.

Michael L. Walden, North Carolina State University[1]

Introduction

One of the recent features of the American economy has been the rise of the dual worker household. Dual worker households increased from 43% of all married couple households in 1967 to 60% in 1992. The jump in dual worker households has been fueled by the increase in married women who work. Working married women rose from 32% of all married women in 1960 to almost 60% in 1991 (Rubin and Riney, 1995, pp. 18-19).

Several reasons have been cited to explain the increase in working married women and the dual worker household. Included are the rise of feminism and women's rights and the changing nature of jobs that has made them more appealing to women.

The popular notion in American society is that dual worker households are necessary to maintain a decent standard of living in today's economy (Wessel and Davis, 1995). This viewpoint implies that single worker household's standard of living is lower today than in previous decades. Higher taxes are often mentioned as the reason for this situation. It's often said of dual worker households, that one worker is needed today to pay the taxes while the other worker pays to feed, clothe, and house the family.

The question of why more households today have two workers goes beyond an issue of dollars and cents. Dual worker households spend less time with children than do married single worker households (Bryant and Zick, 1996). Some analysts have asked whether reduced parental time with children can be linked to various youth problems, such as juvenile crime and low educational performance (Rector and Hirni, 1996).

The issue can be framed in this way. Do more households today have two workers because they must in order to survive economically, and hence the impacts on parental time are an unfortunate consequence? Or, do more households have two workers because they desire increased real income, and these households willingly trade parental time or work time?[2]

These are weighty questions which are at the core of much of the change in American families over the past half century. This paper addresses a part of the implied research agenda by focusing on one of the central questions: has the standard of living of married single worker households fallen in recent decades, while the standard of living of dual married worker households has stabilized or risen? To answer the question, data from the Consumer Expenditure Surveys are examined.

Related Work

There are several bodies of work related to the issue of the standard of living of American families in recent decades. Phillips (1990) and Bluestone and Harrison (1988) have supposedly documented a drop in the real income of the average American family since the early 1970s.

McKenzie (1997) has criticized these results. McKenzie claims the inflation adjustor used by Phillips, Bluestone/Harrison and others, the Consumer Price Index (CPI), has overstated the rise in prices and thus understated real income gains. The recent Boskin Commission (Advisory Commission to Study the Consumer Price Index, 1996) supports this conclusion. McKenzie also says the declining size of the American family means that real consumption per family has not declined as much as indicated by Phillips and others. When McKenzie reduces the annual CPI by the 1.3 percentage points recommended by the Boskin Commission , he finds the average real incomes of American families to have risen during the past twenty five years.[3]

Cox and Alm (1993) measured changes in the average consumption of actual household products, such as housing space, televisions, air conditioners, and automobiles. They found increases in average consumption for the 1970-1990 period.

Sawhill and Condon (1992) examined the changes in real incomes of the *same* households for the period 1977 to 1986 using the University of Michigan's Panel Study of Income Dynamics. They found real income increases for households of all income levels. However, they did not do separate analyses for married dual earner and married single earner households.

The work of Rubin and Riney (1995) is closest to the analysis presented in this paper. Unlike the research cited above, Rubin and Riney directly examined the real income changes of dual and single earner households. Using Consumer Expenditure Survey data from the U.S. Bureau of Labor Statistics, they found the average household real after-tax income of married single earner households fell $1600 (1986 dollars) between 1973 and 1986, while the same measure rose $800 for married dual earner households (Rubin and Riney, 1995, pp. 102-103).

One other line of research is relevant. Several analysts (see Bradbury, 1996, for a review) have examined the *distribution* of household income and have documented a growing disparity in the distribution. The percentages of households in the upper and lower segments of the income distribution have increased, while the percentage in the middle segments has dropped.

This review of related research suggests several considerations for new inquiries. The time period of the Rubin and Riney work is short, spanning only thirteen years. Also, one reason for their findings of poor real income growth is that the time period (1973-86) includes two recessions. It would be good to expand the time period of this analysis.

McKenzie and the Boskin Commission raise the issue of the correct inflation adjustor. All the studies except McKenzie's use the CPI as the adjustor. If, indeed, the CPI overstates price increases, then household real income gains have been understated in all the studies except McKenzie's. It's important for new work to carefully consider the inflation adjustor.

McKenzie and Cox/Alm also emphasize the importance of studying real consumption trends in addition to changes in real income. In addition, McKenzie thinks it's important to consider the impact of family size on real consumption trends.

The work of Sawhill and Condon is unique in tracking income changes of the same households. In contrast, the periodic samples in the Consumer Expenditure Surveys are not of the same households. The work of Sawhill and Condon should be extended to look at real income changes in married single earner and married dual earner households.

Finally, the work on income disparity shows it's important to not only look at changes in average income, but also at changes in the distribution of average income over time.

Analysis With Consumer Expenditure Survey Data

In this section, changes in the standard of living of households with different work statuses are examined using Consumer Expenditure Survey data from 1960, 1972, 1984, and 1994 (United States Bureau of Labor Statistics). The 1960 survey was the earliest available from the Bureau of Labor Statistics, and the 1994 set was the latest available at the time of the analysis.

Data for only full-time workers (those working 35 or more hours per week) with complete income records and no public assistance or retirement income are examined. Also, only households with full-time members, with children under age 18 who did not work, and with no members other than the head, spouse, and children are included. Reductions for taxes include all federal, state, and local taxes, including FICA taxes.

For each year, two age groups are analyzed, young households (those with a head from 20 to 35 years old) and middle aged household (those with a head from 36 to 55 years old). Further, each age group is divided into six household size categories: no children, one child, two children, three children, four children, and five or more children. Last, three household earning types are studied: married dual earners, married single earners, and non-married single earners.

A major consideration was the proper inflation adjustor. The CPI was rejected because of its well documented problems.[4] However, the adjustment used by McKenzie seemed arbitrary. Instead, the implicit price deflator for personal consumption expenditures (IPD-PCE) is used as the inflation adjustor. It corrects the market basket and outlet problems of the CPI by being based on the actual products purchased by consumers each year.[5]

Trends in total real consumption are presented in Table 1.[6] For ease of comparison, values are presented as a ratio of the household type's 1960 value. For example, the 1.16 entry in 1972 for young married dual earner households with no children means average real consumption for that household type was 16% higher in 1972 than in 1960.

The real consumption levels of most household types is higher in 1994 than in 1960. In 30 of the 31 cases for which comparisons are available, the real consumption level is higher in 1994 than in 1960 (young married single earner households with four children is the lone exception).

However, when 1972 is the base of comparisons, the results are different. In nine of the 30 cases for which comparisons are available, the real consumption level in 1994 is lower than in 1972. Seven of these cases are young households, and four of these are young married single earner households. *Thus, in the five cases for which comparisons can be made between 1972 and 1994, real consumption fell in four of the household categories for young, married single earner households.*

Table 1
Real Consumption for Young and Middle Aged Households

Head 20 to 35 Years Old

	Married Dual Earners				Married Single Earner					Unmarried Single Earner			
Num. Chd.	1960	1972	1984	1994	1960	1972	1984	1994		1960	1972	1984	1994
0	1.00	1.16	1.24	1.27	1.00	1.49	1.01	1.40	1.40	1.16	1.18	1.10	1.10
1	1.00	1.06	1.14	1.17	1.00	1.15	0.91	1.16	1.16	1.45	1.65	1.61	1.61
2	1.00	1.21	1.10	1.14	1.00	1.06	1.12	1.03	1.03	1.00	1.01	1.13	1.12
3	1.00	1.18	1.02	1.30	1.00	1.11	0.95	1.01	1.01	1.00	1.20	1.59	1.58
4	1.00	1.26	1.06	1.18	1.00	1.21	0.90	0.85	0.85	1.00	n.a.	1.09	n.a.
5 & more	1.00	1.11	n.a.	n.a.	1.00	1.10	0.85	n.a.	n.a.	1.00	n.a.	n.a.	n.a.

Head 36 to 55 Years Old

	Married Dual Earners				Married Single Earner				Unmarried Single Earner			
Num. Chd.	1960	1972	1984	1994	1960	1972	1984	1994	1960	1972	1984	1994
0	1.00	1.29	1.44	1.45	1.00	1.34	1.35	1.51	1.00	1.37	1.57	1.50
1	1.00	1.18	1.24	1.23	1.00	1.27	1.10	1.37	1.00	1.21	1.12	1.30
2	1.00	1.26	1.39	1.24	1.00	1.12	1.17	1.38	1.00	1.27	1.60	1.07
3	1.00	1.18	1.02	1.22	1.00	1.16	1.24	1.39	1.00	n.a.	1.22	1.61
4	1.00	1.38	1.57	1.42	1.00	1.23	0.99	1.23	1.00	2.48	n.a.	3.02
5 & more	1.00	1.03	0.66	1.20	1.00	1.15	n.a.	1.21	1.00	1.14	n.a.	n.a.

n.a.=data not available due to small sample sizes   Source: Consumer Expenditure Surveys

Table 2 shows the trends in real after-tax income for the same CES data of young and middle aged households. The trends are similar to those found for real consumption. Comparing 1994 to 1960, real after-tax income is higher in 1994 in 28 of 31 cases. However, comparing 1994 to 1972, real income is lower in 1994 in 18 of 30 cases. Furthermore, of these 18 cases, 9 are for married single earners and 3 are for married dual earners.

Table 3 shows trends in the distribution of gross household income by presenting the coefficient of variation (CV) for each household category. A higher CV indicates a relatively larger variation around the mean. Comparing 1994 to 1960, the CV is higher in 1994 in twelve of the 31 cases. But, comparing 1994 to 1972, the CV is higher in 1994 in 18 of 30 cases.

Table 2.

Real After Tax Income Trends for Young and Middle Aged Households

Head 20 to 35 Years Old

	Married Dual Earners				Married Single Earner				Unmarried Single Earner			
Num. Chd.	1960	1972	1984	1994	1960	1972	1984	1994	1960	1972	1984	1994
0	1.00	1.31	1.39	1.41	1.00	1.29	0.88	1.20	1.00	1.16	1.13	1.14
1	1.00	1.15	1.26	1.45	1.00	1.19	1.07	1.32	1.00	1.32	1.41	1.29
2	1.00	1.29	1.20	1.27	1.00	1.26	1.07	0.87	1.00	1.04	1.00	1.13
3	1.00	1.29	0.86	1.43	1.00	1.23	1.25	1.18	1.00	1.48	1.48	1.04
4	1.00	1.42	1.02	1.23	1.00	1.33	0.98	0.74	1.00	n.a.	1.08	n.a.
5 & more	1.00	1.41	n.a.	n.a.	1.00	1.17	1.06	n.a	1.00	n.a.	n.a.	n.a.

Head 36 to 55 Years Old

	Married Dual Earners				Married Single Earner				Unmarried Single Earner			
Num. Chd.	1960	1972	1984	1994	1960	1972	1984	1994	1960	1972	1984	1994
0	1.00	1.55	1.57	1.70	1.00	1.62	1.50	1.37	1.00	2.47	1.74	1.61
1	1.00	1.47	1.35	1.73	1.00	1.49	1.21	1.18	1.00	1.40	1.26	1.43
2	1.00	1.52	1.50	1.53	1.00	1.32	0.97	1.26	1.00	1.33	2.00	1.16
3	1.00	1.29	1.09	1.70	1.00	1.32	1.27	1.36	1.00	n.a.	1.30	1.67
4	1.00	1.80	1.10	1.34	1.00	1.48	0.91	1.03	1.00	2.25	n.a.	1.03
5 & more	1.00	1.43	0.75	1.47	1.00	1.43	n.a.	0.98	1.00	0.86	n.a.	n.a

n.a.=data not available due to small sample sizes Source: Consumer Expenditure Surveys

Table 3.

Trends in the Coefficient of Variation of Gross Income for Young and Middle Aged Households

Head 20 to 35 Years Old

	Married Dual Earners				Married Single Earner				Unmarried Single Earner			
Num. Chd.	1960	1972	1984	1994	1960	1972	1984	1994	1960	1972	1984	1994
0	0.56	0.36	0.50	0.49	1.06	0.56	0.93	0.61	0.73	0.51	0.74	0.66
1	0.44	0.39	0.52	0.53	0.72	0.37	0.63	0.71	0.42	0.37	0.66	0.41
2	0.54	0.47	0.53	0.46	0.75	0.48	0.66	0.52	0.45	0.80	0.50	0.48
3	0.47	0.60	0.79	0.46	0.64	0.50	0.52	0.52	0.40	0.10	0.61	0.34
4	0.39	0.57	0.36	0.43	0.65	0.50	0.32	0.52	0.03	n.a.	0.11	n.a.
5 & more	0.41	0.44	n.a.	n.a.	0.64	0.45	0.39	n.a.	0.21	n.a.	n.a.	n.a.

Head 36 to 55 Years Old

	Married Dual Earners				Married Single Earner				Unmarried Single Earner			
Num. Chd.	1960	1972	1984	1994	1960	1972	1984	1994	1960	1972	1984	1994
0	0.56	0.39	0.58	0.53	0.63	0.59	0.79	0.56	0.60	5.74	0.78	0.61
1	0.48	0.57	0.66	0.51	0.54	0.70	0.70	0.57	0.53	0.64	0.52	0.55
2	0.36	0.49	0.53	0.56	0.67	0.67	0.99	0.52	0.67	0.56	0.62	0.46
3	0.58	0.37	0.47	0.55	0.68	0.62	0.81	0.72	0.29	n.a.	0.56	0.49
4	0.39	0.55	0.60	0.35	0.61	0.54	0.59	0.65	0.46	0.07	n.a.	0.39
5 & more	0.44	0.27	0.46	0.31	0.58	0.43	1.09	0.70	0.47	0.59	n.a.	n.a.

Conclusion

Married single earner households have a point in claiming that their incomes have not kept up with the incomes of married dual income households. Comparing 1994 to 1960 with Consumer Expenditure Survey (CES) data, real after-tax income of virtually all household categories increased. However, comparing 1994 to 1972, the real after tax income of several married single earner households fell, while the same measure for married dual earner households rose. These results were found after using a more modest inflation adjustor than the much-criticized Consumer Price Index. Also, the results for married single earner households cannot be totally accounted for by higher tax burdens.

This work should be viewed as one part of a larger research agenda which investigates the work and household time choices of American families and the implications of these choices for a wide range of social issues. Establishing and understanding the income trends of American families is just the first step in this agenda.

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Endnotes

1. Professor, Department of Agricultural and Resource Economics.
2. The sociologist Hochschild (1997) posits a third possibility: that more parents work today because time at work is less stressful than time at home.
3. McKenzie finds the same results for families of all income levels.
4. These problems include infrequent adjustment of the "market basket" and outlets and imprecise adjustment for product quality changes.
5. The greatest differences between the CPI and the IPD-PCE occur for the 1960s and 1970s. The CPI shows a 400% increase between 1960 and 1994, compared to 353% for the IPD-PCE. Likewise, the CPI shows a 255% increase between 1972 and 1994, compared to 229% for the IPD-PCE.
6. Weighted sample sizes vary by cell and range from 7597 to 5,000,753. Trends in the real consumption of individual spending categories, like shelter, transportation, and food, were also developed but aren't presented here due to space limitations.

Financial Manager Profile Scale: An Initial Analysis

An effective diagnostic tool for profiling financial managers has been a continuing focus of work by academics and financial management professionals. This article reports the initial results of a factor analysis of 38 financial attitudes and behaviors that identified four distinct profiles: Financially Anxious Managers, Sound Financial Managers, Credit Dependent Managers, and Financially Distressed Managers. The Financial Management Profile Scale (FMPS) appears to offer promise for use by financial educators and practitioners.

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The relationship between man and his money has intrigued observers since Biblical times. But it was not until research efforts were undertaken by investigators such as Goldberg and Lewis (1978), Rubenstein (1980), and Yamauchi and Templer (1982) that steps were taken to develop measurements of money attitudes. In 1982, Yamauchi and Templer created one of the most widely recognized money attitude scales. Based on clinical and theoretical literature, they identified three broad content areas concerning money and psychology: security, retention, and power-prestige. From this foundation, Yamauchi and Templer generated 62 statements that were later reduced to a 29-item Money Attitude Scale (MAS) based on use with a sample of adults.

According to Yamauchi and Templer (1982), factor analysis revealed four factors, Power-Prestige, Retention-Time, Distrust, and Anxiety, which provided a reliable assessment of money attitudes. A person who scored high on Power-Prestige likely held attitudes that indicated status seeking, competition, recognition, and acquisition. Conversely, low scorers on Power-Prestige tended to minimize the importance of money as a symbol of success and status. Individuals who scored high on Retention-Time emphasized the process of financial preparation, and generally held future security as a primary goal. People who scored high on Distrust appeared to maintain hesitant, suspicious, and doubtful attitudes involving money situations. Finally, someone who scored high on the factor Anxiety tended to view money as a source of anxiety, while low scorers could be described as less worrisome with and about money. A decade later, Anderson, Camp, Kiss, Wakita, and Weyeneth (1993), using the MAS with a sample of college students, had results inconsistent with those of Yamauchi and Templer.

Furnham (1984) subsequently expanded the focus of the Yamauchi and Templer (1982) research to include money attitudes and behaviors by combining items from the MAS with items from Goldberg and Lewis (1978) and Rubenstein (1980). Furnham's factor analysis results with a sample of adults in Great Britain were similar to those of Yamauchi and Templer with factors identified as Obsession, Power-Spending, Retention, Security-Conservative, Inadequacy, and Effort-Stability. The resulting Money Beliefs and Behaviors Scale (MBBS) caught the attention of family financial management researchers who began a continuing stream of research. Research studies with the MBBS using the entire 60 items (Bailey, Johnson, Adams, Lawson, Williams, & Lown, 1994; Bailey & Lown, 1992), a 42-item version (Bailey & Gustafson, 1986; 1991; Wilhelm & Varcoe, 1991) and a 38-item version (Wilhelm, Fridrich, & Varcoe, 1992; Wilhelm, Varcoe, & Fridrich, 1993) were conducted with samples of college students or adults. Some studies considered the relationship between MBBS results and selected demographic characteristics. MBBS results of these studies were similar to, but never consistent with, results reported by Furnham. Results on the relationship between money attitudes and demographic factors also were inconsistent.

Concurrently, two other related lines of inquiry were emerging. One focused on cognitive style, or the way an individual perceives, gathers, uses and perhaps acts on financial information. The Prochaska-Cue Inventory of Financial Style (1988; 1993) measured cognitive personal financial management style, identified as Analyzing and Holistic. The Rettig and Schulz (1991) Preferred Financial Decision Making Style of Individuals instrument identified two cognitive financial decision making styles described as the analyst-synthesist and realist-pragmatist approaches. The other line of inquiry emerged from financial practitioners who used additional methodologies to explain money attitudes on the basis of their work with clientele (e.g., Bernstein, 1993; Domini, 1988; Epstein & Garfield, 1992; Gurney, 1988; Mehrabian, 1991; Mellan, 1994; Pring, 1993). From this latter perspective, Epstein and Garfield (1992) asserted that the focus on financial style preference is overdue, because personal understanding of what preferences and attitudes means to an individual allows for greater control over financial behavior.

Building on the view of Epstein and Garfield (1992), this research evolved with the purpose of developing a tool which could serve as a foundation for (a) diagnosing clients' spending problems and underlying attitudes, (b) encouraging client discussion to increase problem awareness, and (c) encouraging client discussion in the development of a mutually agreed upon diagnostic intervention plan. Specifically, the purpose of this paper is to present the initial results from the financial manager profile scale (FMPS) for use by financial educators and practitioners. The scale presented does not replicate Furnham's (1984) earlier work, but does include statements reflecting both financial behaviors and attitudes toward money.

Methodology

Instrument and Data Collection

Data for this study were generated from a U.S. Department of Health and Human Services demonstration project conducted in a Washington, D.C. SMSA county. The project was designed to link participants to community services that might offer them intervention(s) to stabilize their financial situation. A comprehensive assessment of the participants' financial situation, and financial counseling intervention, when applicable, were foundations of the project. Cooperative extension staff and trained volunteers conducted the computerized financial assessment and administered the 170-item questionnaire. The instrument assessed financial attitudes and practices, housing practices and attitudes, social support, family functioning, and several personality measures.

Data collection for the project extended from January 1992 through June 1993. Financial and descriptive data were converted to SAS readable files. Overall, 765-project clientele provided information for the financial profile, with 757 records actually available for use. Of the 765 participants, only 519 completed the survey instrument. Data for this research were limited to the 38 items assessing financial attitudes and behaviors on a four-point Likert-type scale where 1 equaled "strongly disagree" and 4 equaled "strongly agree." These items were generated from the literature and previous research to reflect a broad range of attitudes and behaviors characteristic of prescriptive financial management strategies as well as practices common to the financially distressed. Sample size was reduced to 375 for this analysis due to missing data on at least one item considered.

Sample Characteristics

Female respondents comprised 57.3% of the sample, with males comprising 42.7%. The ethnic background of respondents was diverse with 57.6% of respondents being White, 33.3% Black, and 9.1 responding as other, including American Indian, Hispanic, Asian, other, and unknown. The majority of respondents were married (55.1%), followed by respondents who indicated being separated, divorced, or widowed (27.3%). Single respondents constituted 9.5% of the sample. Other responses included single parent household (4.3%), shared living-family unit (3.2%), and other (.5%).

The majority of respondents held less than a four year college degree (85.2%), with the remainder (14.8%) having a baccalaureate degree or higher. Households with children were the target audience and the majority of respondents (92.3%) reported having three or fewer children per household, with the remainder reporting 4-10 children. The mean age of respondents was 37.07 years, with a range of 21 to 87 years. The diversity of the sample was particularly evident in the reported gross household earned and unearned income that ranged from no annual earnings to $65,184, with a mean of $6,802.

Limitations of the Data Set

Findings from this study should be considered with caution. First, this was a convenience sample of financial managers who acknowledged some level of financial distress in their household. They chose to participate in this project because of the perceived benefit of the financial education/counseling offered or the referral to other community resources. Second, when compared to the U.S. Bureau of the Census (1994) data for the nation in 1992, this sample was, on average, slightly older, less educated, and representative of greater racial diversity. Households were comprised of fewer married couples, and reported more children present. The income range also was lower; fewer households reported two earners.

Statistical Analysis

To provide a parsimonious description of the financial manager profiles, principal components factor analysis was performed on the 38 items. Twelve factors with eigenvalues of 1.0 or greater were extracted and accounted for 60.13% of the variance. Varimax rotation was used to simplify the factor loadings structure and to increase interpretability. With orthogonal rotation the factors remain uncorrelated, and the sum of the variance accounted for by the factors does not change. Finally, four factors were extracted on the basis of Catell's scree test (1966), Kaiser or eigenvalue-one criterion, and the interpretability of the rotated factors.

Items loading .40 or greater on each factor were retained. This method resulted in 29 financial attitude and behavior statements representing four factors, named for the dominant concepts. Nine items lacked sufficient loadings to support the internal consistency of the factors and were omitted from the scale. Cronbach's coefficient alpha was calculated for each factor to determine internal consistency.

Results and Discussion

Four underlying financial manager profiles emerged from the factor analysis: (a) Financially Anxious Managers, (b) Sound Financial Managers, (c) Credit Dependent Managers, and (d) Financially Distressed Managers. Rotated factor loadings and Cronbach's coefficient alpha for each factor are presented in Tables 1. A brief discussion of each factor and supporting item loadings follows.

Financially Anxious Managers

The first factor, labeled Financially Anxious Managers, consisted of 11 items representing individuals who worried about meeting normal daily and monthly living expenses. A common element linking the 11 statements was a sense of anxiety or worry concerning financial situations and tasks. A second theme focused on the inability to meet financial needs (e.g. expenses exceeding income, increasing debt, overdue notices). Someone scoring high on this factor would likely view their finances as a source of worry and anxiety. Alternatively, someone scoring low on this factor would be less worried about finances and money situations. Consistent with this profile, respondents indicated that a temporary decrease in household income would cause a major financial emergency. Savings were not available for meeting downpayment needs.

Sound Financial Managers

The second factor, Sound Financial Managers, consisted of eight items representing individuals who were most prepared for financial emergencies. A common theme was a focus on facts and a strong management orientation to plan, decide, and implement. These individuals had existing financial plans, accurate estimates of living expenses, a budget, and a solid understanding of financial statements and terms. Someone scoring high on this factor would likely approach financial problems carefully, methodically, and with great attention to details. A low score might characterize someone with a somewhat cavalier attitude regarding financial management.

Credit Dependent Managers

Factor 3, Credit Dependent Managers, had a Cronbach's alpha of .67. This factor, unlike any found in the literature review, suggested that someone scoring high on this factor probably had credit management problems, which, if poorly administered, might lead to increasing financial distress. The four items that comprised this factor suggested that a high score would be indicative of (a) someone who relies on credit almost exclusively for daily expenditures, (b) someone who finds emotional relief in spending money, and (c) someone who, although making minimum monthly payments on debt, may be pushed into a financial emergency if his/her income fails to meet expenditure needs. In summary, someone scoring high on this factor, would likely find credit a source of, as well as, protection from stress and anxiety.

Financially Distressed Managers

Factor 4, Financially Distressed Managers, described a manager with serious financial management problems, such as bouncing checks, disregarding spending plans, having accounts in collection, spending more money than earned or possessed, having money related arguments with family members, and regularly borrowing money to meet bills. This factor consisted of six items, and had an internal consistency of .61. A high score on this factor would likely characterize someone who was regularly confronted with financial and family conflicts. Such conflicts might be attributed to a failure to plan financially or a lack of discipline in managing spending.

Summary

The Cronbach coefficient alpha for the final form of the Financial Manager Profile Scale (FMPS) was .75. Coefficients for Factors 1, 2, 3, and 4 were .81, .70, .67, and .61, respectively. A coefficient alpha of .65 was considered sufficient to indicate scale reliability (Pedhazur & Schmelkin, 1991), and the scale and factor coefficients were in a range similar to those reported by other researchers (e.g., Bailey & Lown, 1992; Wilhelm, Varcoe, & Fridrich, 1993; Yamauchi & Templer, 1982). Mean scores for the total FMPS and Factors 1, 2, 3, and 4 were 2.64, 3.02, 2.80, 1.54, and 2.47, with standard deviations of .34, .59, .52, .61, and .62, respectively.

Table 1
Factors Generated from the Financial Manager Profile Scale

Factors	Statements	Rotated Factor Loadings
Factor 1. Financially Anxious Manager (α = .81)		
	I worry about being able to meet my normal monthly living expenses.	.79
	It costs more for my family to live than what money we have coming in each month.	.71
	I am reluctant to open the mail for fear of finding more bills.	.67
	I worry about the total amount I have to pay each month on my charge accounts, credit cards, and/or other loans.	.56
	I have received overdue notices because of late or missed payments.	.54
	Conversations about money with family, friends, or co-workers make me anxious and uneasy.	.53
	Overall, I am more in debt than this time last year.	.53
	When purchasing large items, such as an appliance, a car, etc., I have little or no money available for a down payment.	.47
	Simple financial tasks, such as balancing the checkbook or paying bills, are postponed because the thought of it makes me anxious and uneasy.	.45
	A temporary decrease in household income would likely cause a major financial emergency for my household.	.45
	I have trouble meeting monthly health care expenses.	.42
Factor 2. Sound Financial Manager (α = .70)		
	I have an accurate estimate of my actual monthly living expenses and my total debt.	.67
	I have a weekly or monthly budget that I follow.	.64
	I have an overall plan that will help me to reach my financial goals.	.60
	I study and understand the credit statements, credit terms, and determination of finance charges for my loan(s)/account(s).	.54
	Once I have made a decision about finances, I immediately take action.	.51
	I prefer to make current spending decisions based on a long-range financial plan.	.50
	My household financial records are detailed and accurate.	.49
	I want to consider as many detailed facts as possible before I make a financial decision.	.47
Factor 3. Credit Dependent Manager (α = .67)		
	Although I make my payments, I often charge other purchases so my overall debt level rarely goes down.	.74
	Purchases, such as clothing or other basic necessities, which were previously paid for with cash are now purchased on credit.	.73
	I have recently opened additional store charge accounts or credit card accounts.	.61
	I can't resist a sale! Sometimes, I buy things I truly do not need, but want.	.55
Factor 4. Financially Distressed Manager (α = .61)		
	I sometimes "bounce" checks.	.55
	I make spending plans, but I have trouble disciplining myself to carry them out.	.53
	Creditors' legal departments or collection agencies have written or phoned regarding my account(s).	.48
	I often spend more money than I have.	.45
	Money related arguments with family (spouse/partner, children, or others) occur frequently.	.41
	I have regularly borrowed money from family, friends, or coworkers to get me through a hard time	.40

The Financial Manager Profile Scale (FMPS) provided a reliable assessment of four distinct financial management profiles: (a) Financially Anxious Manager, (b) Sound Financial Manager, (c) Credit Dependent Manager, and (d) Financially Distressed Manager. Although the results of previous financial attitude scales have been inconsistent, there is general consensus among researchers that money attitudes can be grouped into factors such as: obsession, inadequacy, distrust, power, and anxiety (Watkins, 1994). Some of those same attitudes were apparent in the FMPS. The FMPS also is consistent with earlier scales in that the profiles represent a broad range of attitudes and proficiencies in dealing with personal finances.

Conclusions and Implications

Results of this study suggest that the FMPS, with continued use and refinement, may offer researchers and practitioners a unique assessment tool for understanding financial manager profiles. First, the instrument is brief, consisting of 29 attitude and behavior statements. Second, the scale goes beyond measuring money attitudes by providing a more comprehensive analysis of financial behaviors. Third, the profiles identified represent a range of behaviors and financial management styles. Fourth, the scale can be used as a foundation to diagnose spending problems and underlying attitudes, increase problem awareness, and develop diagnostic intervention plans. In brief, the FMPS is easy to administer and appears to be predictive of a range of financial manager profiles. The following discussion outlines how the FMPS can benefit financial educators and practitioners.

Scores developed from the FMPS could be used as a conduit to offering specific financial planning services, or in some cases, as a diagnostic tool for financial educators and practitioners in creating financial manager (i.e., client) profiles. The factors appear to provide predictive indications of the amount of financial management savvy someone possesses. These factors also can be used to indicate a need for more disciplined savings, spending plans, or strategies on the part of clientele. Because the factors are similar, yet distinct, the FMPS could be used to determine if a client needs education or counseling in simple financial tasks, credit and spending management, or comprehensive planning management. For example, clients who score high on factor two, Sound Financial Manager, represent individuals who already have their financial records in order, have a budget, and may have excess disposable income for investing. Individuals who score low on this factor probably need more remedial financial assistance that financial planners, for example, often are unable or unwilling to provide

The FMPS could also be administered to couples to assess discrepancies in financial attitudes and practices reported by the partners. Results of the FMPS could be used to identify and resolve potential money conflict areas.

The FMPS could be useful with clients who simultaneously acknowledge financial mismanagement problems and a lack of skills, time, or interest to address those problems. The FMPS could be used to quickly and accurately pinpoint client financial management strengths and weaknesses.

In addition to its diagnostic usefulness for financial educators and practitioners, the FMPS also offers considerable potential to researchers interested in financial personality and behavioral attitudes in the creation of financial manager profiles. As one of the first financial manager profile scales that does not follow directly from work done by Furnham (1984), or focus entirely on money attitudes, the FMPS provides researchers the opportunity to test the scale with diverse populations, as well as unique homogenous samples. A subsequent step in the continuing development of a reliable scale is to consider the relationships between the individual profiles and selected demographic characteristics. The results of such tests will be important to financial educators and practitioners who require tools to create financial manager profiles quickly, efficiently, and effectively.

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Real World Financial Management Tools and Practices

The purpose of this research is to discover techniques used by families in the day-to-day management of their finances. This study uses a case study of seven average American families to explore their normal routines. The information fills a gap in the existing research. The study found managers have a system and that common practices existed including extensive use of mental processing, routines, visual clues, multiple accounts, and a short-term focus.

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Introduction

The financial management practices of individuals and families interest financial planners. Questions regarding the long term preparedness, growth in net worth, retirement planning, and use of recommended financial practices among today's families are common research questions. With increases in personal bankruptcies and a decrease in the savings rate, concern arises over the family's financial well-being. This suggests financial managers need money management skills more than ever. Existing research has shown the recommended management practices are not used but has left educators and practitioners with little knowledge of what people actually do. Such information is crucial if educators are to help individuals and families prepare for today's increased financial pressures and complicated financial matters (Godwin, 1990a, 1990b; Lown, 1986; Winter, 1986b).

The purpose of this article is to discover techniques used by families in the day-to-day management of their finances. This study uses a qualitative approach for data gathering. Qualitative methodology explores what people actually do. Questions are open-ended and probing with each question stemming from an earlier response.

The Setting

Godwin (1990b) defined family financial management as "the planning, implementation, and evaluating by family members that is involved in the allocation of their current flow of income and their stock of wealth toward the end of meeting the family's implicit or explicit financial goals" (p. 103). From the normative perspective, financial management includes: regular generation of financial statements; budgeting; control of spending; recording income and expenses; and tax, insurance, investment, retirement and estate planning (Garman & Forgue, 1997; Rettig & Mortenson, 1986). The purpose is to enhance the well-being of families. However, these same studies indicate that few families use the recommended practices (Beutler & Mason, 1987; Davis and Carr, 1992; Godwin, 1990b; Godwin & Carroll, 1986; Hira, 1987; Titus, Fanslow, & Hira, 1989).

There is no argument that the American family manages its financial affairs. Winter (1986a) notes that families are managing and offers proof by observing families have "food on the table,...clothes on their backs,...and [the] utility bills [are] paid on time" (p. 145) and that they, for the vast majority, avoid serious trouble such as bankruptcy, problems with creditors, etc. The question is what are families doing?

Some clues exist in family life case studies, such as that of Rainwater, Coleman and Handel (1959) who commented about the "tin can" economy. Money for each budget item is placed in tin cans. Money is then withdrawn for each purchase. When the tin can is empty, no more purchases for that item are made until the can is refilled. Other qualitative works offer scattered bits and pieces of information (e.g., Hochschild, 1989; Jackson, 1985; Newman, 1988; Rosenblatt, de Mik, Anderson and Johnson, 1985; Rubin, 1976).

The lack of understanding of actual practices caused Davis and Carr (1992) to ask about "the incentives that actually lead people to embrace the recommended process" (p. 14) as have others (Godwin, 1990b; Heck, Winter, & Stafford, 1992). Financial management instructors even recognize that they do not utilized the practices they teach (Godwin; 1990a; Prochaska-Cue, 1993). Lown (1986) wrote, "Do as I say, not as I do" (p. 5). So what are families doing to manage their finances? (Godwin, 1990a, 1990b, 1994; Varcoe, 1990; Winter, 1986a, 1986b)?

Method

Family financial management research has typically relied on quantitative methods. Studies have examined the prescribed list of practices and asked who used one or more of these practices? The results found little consistent use of these practices. The lack of use has caused researchers to suggest that perhaps a qualitative approach might fill the gap (Godwin, 1990b; Winter, 1986a). Qualitative research allows us to learn about people in the context of their lives, in their natural surroundings, performing their normal routines, and surrounded by their normal social structures and contacts (Bogdan & Biklen, 1992; Denzen & Lincoln, 1994; Guba, 1987, 1990, 1992; Lincoln & Guba, 1985; Miles & Huberman, 1994; Wolcott, 1990). The results are "descriptive" (Bogdan & Biklen, 1992, p. 30) and gathered from "ordinary people with ordinary knowledge" (Spradley, 1979, p. 25).

For this study the intent was to match the American median family as defined by U.S. Census data: a couple related by marriage with both partners age 30 to 40, in a first marriage of eight or more years with one or two children, an income of $40,000 to $60,000 with both the male and female adults employed, and both adults having a BS degree or less (1994 Statistical Abstract, Table 714; U. S. 1990 Census of the Population and Housing-Social, Economic, and Housing Characteristics, Table 5; U. S. 1990 Census of Population-Social and Economic Characteristics, Table 16, 17 & 23).). Families fitting this average were selected and interviewed until "the responses began to become redundant" (Lincoln & Guba, 1985). Seven family money managers became the respondents for the study. All interviews were taped and transcribed interviews. Families were interviewed on a quarterly basis from 1992 through 1995 and were conducted by the same person.

To assist in offering reliable and valid data, the tools of: member/ respondent checking (respondent receive and comment on transcribed material's accuracy, meaning and clarity); peer debriefing; triangulation or supporting findings through multiple means or respondents; meetings with colleagues to discuss findings, reflections, key words and themes; and input from the researcher's major professor plus an additional faculty member were used (Guba, 1981; Guba & Lincoln, 1994; Lincoln & Guba, 1985; Miles & Huberman, 1994).

Introduction to the respondents

Seven families are the source of data for the study. All respondents live in purchased single family dwellings in small towns and cities, populations ranging from 6,000 to 60,000, in the central part of the United States. All of the families have from one to three children; all of the children are living at home.

Angie and Bob

Angie and Bob are both self-employed. They have two small children, a family income of $40,000 per year and little in savings. They are one of two families in the study utilizing a financial advisor's services. The family debts consist of a home mortgage, a vehicle loan, and some credit card debt. Angie and Bob, like the other families, have several credit cards. Although Angie tries "not to have a balance on the cards, I can't say I never have." Angie considers their bills "routine." She feels she knows what she can afford without any tools beyond the check register. She feels fortunate, as "there has rarely been a time where I couldn't buy something," but "I don't go out and buy a filet mignon."

Cindy and Greg

Cindy and Greg have three children. Greg is employed full-time; Cindy part-time "so I can be home with the family." Both have additional part-time jobs. Together their current income is "about $50,000 per year." Cindy and Greg have a "home loan, a car loan, a personal loan, and some credit card debt." About the personal loan Cindy said, "We usually have one of those. We get one paid off and something else will die or, you know how it is." They have three credit cards with two having revolving balances. Cindy said, "I don't know if it is a correct mind set, but I think most people have those." When asked to be a part of the study, Cindy commented, "I don't do what I am supposed to, but I am normal." Cindy feels they are keeping up but are "not saving." Her greatest financial management frustration is that she and Greg only receive a monthly paycheck from their full time jobs. To handle this, Cindy writes all ot the checks "first of the month." This offers a financial picture for the month. She pays the credit card bills last giving each an amount she believes she can afford based on "experience."

Gary and Donna

Gary and Donna are in their early 30's with a five-year old daughter. They are both employed full-time. The family's income varies, with Gary on a salary-plus-commission basis, but averages around $60,000 per year. Gary and Donna are the only family to use a computerized financial package. Gary and Donna have a home loan, a personal loan, a vehicle lease, and, quite often, a credit card balance. Debt planning for Gary and Donna is determining if a new payment fits into their income flow. Bill paying cycles around "my [Gary's] commission check on the 10th." The amount paid on any bill depends on how they feel financially. If they do not feel they can pay a bill in full, their procedure is to pay everyone something.

Lorrie and Andy

Lorrie and Andy have two children and a current income of around $50,000 per year. Their debt consists of a house payment, two vehicle loans, and some credit card debt. She wishes they could "pay off some of this debt and not get back into it" but debt is a part of her generation, "We don't live like [our parents did]. We live 'life to [illegible] max,' spending most of what we make." Lorrie feels they could save first but "it takes longer. We are going to have it right now." Lorrie feels like they are financially on the edge but "doing okay" as "the bills are paid" and they have "a roof over their heads" but that they are "living from paycheck to paycheck like everyone else." She is more concerned about "making sure ends meet" than net worth. Savings are money "left over."

Nora and Don

Nora and Don both work full time plus Don has a second part-time job. They gross about $50,000 per year. They have three children. Nora questioned, "What could be learned from me?" when asked to be included in the study. Her husband acknowledged that she has a unique system, "Her system is a one of a kind." Don continued, "I know that we should do a budget and stuff" but to him financial management means "doing it by going by your gut." Nora said, "I don't budget," but uses a "tablet" to help track the incoming bills, and "the next two to three paychecks." The family debt consists of a home loan, credit card debt, and a home equity loan for a boat. The home equity loan allows them to "write off the interest" and "spread out the payments" over a 12 year period so they are not "stuck with those high payments." Nora limits their debt based on "guilt" and experience that says, "You get one thing paid off, then you know you can buy something else." Overall, Nora feels "overwhelmed" by their financial situation and that they are "losing ground."

Sam and Gail

Sam and Gail have been married for 20 years, have two children, work full time and gross approximately $50,000. Sam follows few recommended practices commenting, "There is no budget in this house, none whatsoever...I cannot tolerate it. There ain't nothing I have to live by." Sam's planning consists of "I scribble a whole bunch of things and then decide what to do from there." Sam said, "I can make payments but if you ask me to save, it ain't going to happen...If I don't have a car payment due, I am looking for something else to buy." Sam said that management occurs but that people have individual ideas of what management is, "People do plan ahead but we just don't realize we are doing it" or having difficulty accepting them "do[ing] it their own way." Sam and Gail find debt acceptable. Their current debt, a $1000 a month payment, is financed with an "open line of credit using our home equity." They have no other mortgage or consumer loans or any revolving credit card debt. Sam commented that debt levels are "experienced based...We...build to that [level of monthly payments]. I had the history of being able to make them, why can't I continue?"

Sandy and Carl

Sandy and Karl have two children, are both employed (Karl full-time and Sandy part-time), and make about $40,000 per year, an $8000 a year decrease because of Karl's recent job change. While the income drop is significant, Sandy considered it [the job change] "a good choice for the family," as the job is "less stressful," and "left Karl free on the weekends." Sandy said initially the change meant "less recreational shopping...sending smaller payments on my flexible [credit card] bills" and being "more cautious," but "now [I am] back to my old ways." The most significant issue is the uneven checks Karl receives as an hourly worker. Sandy's management philosophy is controlled by: (1) "safety" which she defined as "savings" ($1000 in the bank) and having cash available to pay current bills; and (2) experience "We have managed in the past and can do so again in the future." Sandy does not use a "budget," saying, "People don't have the time to do all of these things [meaning the recommended practices]," and "people don't want to know that they have over-spent." Their debts include a home loan, a home equity loan for an auto, a 22% personal loan for their big screen television and credit card debt.

Results

The purpose of the study is to discover techniques used by families in the day-to-day management of their financial affairs. The understanding of what people are doing is a basic building block for the development of a financial management system that money managers are more likely to use. In this study that understanding begins in three broad areas.

System

Each family manager has a system he or she has developed to take care of their finances. The system or process is formalized, done in a regular manner and on a regular basis. The system is mental, not in writing and focuses on short-term financial stability, "staying current on one's bills" and "not going in the hole."

Each system uses a significant amount of mental processing. Cindy noted having "a mental thing of what am I going to owe this month." Lorrie said, "mentally, I know what all of my bills are." Other references included Cindy's mental adjustments for the unexpected; Angie's "mind games;" Sandy's mental allocation of funds based on feel; respondents' paying bills by "feel;" Nora's "mental adjustments;" and Sam's "thinking about."

The use of mental processing however is quite demanding. To help balance or avoid using all of one's mental resources for financial planning, respondents establish routines. These routines include Nora's selecting an insurance company who will "bill every month;" Lorrie's paying the "same amount every month" on her credit card bills; respondents "spending the same on groceries each week;" and the anticipation that bills are "consistent" each month. Sandy discussed the importance of income consistency, "The most frustrating thing to me is that I'm used to [a situation]...where every paycheck was exactly the same....You could plan for it; [now] you never know." Ease and convenience are factors that also limit the use of mental resources and time. Both appear in bank selection, use of credit cards, automatic overdraft transfers, and Sam's keeping accounts open "[so] I can borrow...in a hurry."

The idea of routines also included the use of automatic bill payments. Nora, Cindy, Angie, Lorrie, and Gary all try to have as many bills as possible paid directly from their checking accounts. While companies working with banks may offer that service, Nora gave an example of other ways it make work. Her dentist "accepted a pad of signed checks...and when [the due]date comes, they just rip it out [the appropriate check] and deposit it."

Tools

Even though family financial managers did not use the recommended practices creating instead their "own" system, these systems showed similarity in the use of certain tools. As might be expected all managers used some form of a checkbook register. Another tool included the use of multiple accounts, checking, savings or a combination, for managing the financial affairs of the family. Multiple accounts help the financial manager physically allocate funds thus avoiding budgetary categories and provide early financial warning signals. Another common tool is the use of visual reminders such as due date "calendars" and leaving unpaid bills in visible sight.

Several respondents use written tools, similar but yet different from those recommended. Lorrie uses a "little piece of paper" and Nora a "tablet." Even Gary's use of Quicken varies significantly from the recommended practices. Even Sam, whose system is the most unstructured, admitted to "scribble[ing] a whole bunch of things and then decide[ing] what to do from there. It doesn't include dollars, though, in detail, just ideas."

Underlying motivators

Three motivators were common among the managers and may offer the greatest understanding into the managers' reasoning. Short term safety is the first. This meant "having the funds available to cover current bills," "provid[ing] protection if funding gets tight" and "avoid[ing] an overdraft." Cindy, as well as Lorrie, Nora, and Angie, use a "false balance" or an additional amount of money that remains in an account even it showed a zero balance. "Then I know I am not going to hopefully overdraw," Cindy said. Other facets of short term safety meant the respondents' understanding and use of the "float" period, the leeway companies allow to receive payments.

Another motivator is current comfort. Lorrie commented that, "We have a different [idea]....People were married a lot longer [in her parents' generation] before they got their things....We don't live like that. We live 'life to the max'....We are going to have it right now." Sam said, "I will enjoy it now" and Sandy noted, "money was for...fun." What the respondents typically bought are wants, debt for "toys" is a perfectly logical thing," said Sam.

Acceptance of debt is a third motivator. All of the respondents openly accepted debt and recognized its significant impact in family financial management efforts. Each family has an acceptable level of debt that "grew" as they "became adjusted to higher levels." Experience told them that debt was best if continuous. "Finish one loan, get another" was common in all of the families. Financial managers commented that if they would ever quit making debt payments the money would just "disappear" and they would get no visible and tangible reward for their efforts. Debt went for home improvements, vehicles, clothing, eating out, gas, emergencies, vacations, etc. It was financed with mortgages, credit cards, constant personal loans, and home equity loans.

Discussion and Implications

So what are families doing? Families are managing and do so in a manner ranging from Sam's "Oh, I think about" and "people do plan ahead, but we just don't realize we are doing it," to Gary's use of Quicken to Sandy's use of a hierarchy of accounts or Nora's belief that "everything will work out, it always has in the past." Management is consistent, formalized, and focused. Families manage for stability, to keep the family out of "the hole," to smooth out the "bumps" and "dips," and to allow families to enjoy today. Management is not however the recommended practices.

Some of the commonalties found included financial managers focused on short term financial viability, defined as "paying our bills" and "keeping a roof over our heads." Internally generated savings were typically very small accounts. Most of the investment and savings that the families had were in company sponsored retirement accounts. Families accepted debt for today's wants of recreational items, modern conveniences, multiple vehicles, and electronic wizardry. Debt allowed the family to "live for today" and provided a means to increase their stock off goods. To handle their system, managers placed limits on the mental and time resources they would use making ease, convenience and routines important. For all of the similarities that existed in the various systems, a large amount of individuality was also noted. Tools were individualized. All managers desire the same end, short term financial viability, but their paths to reach that end differ. Experience plays an important role in each manager's system and its development. Three managers indicated that their earlier system were more formalized and more often in writing. Finally managers wanted to feel normal, that their system is typical of what others were doing.

Understanding what people do is the first step to developing a more accepted set of practices. This set must meet the respondents short term safety goal and the professionals' goal of long term well-being. What are the implications for teaching financial management? First the profession must recognize the focus on short term financial viability or "keeping the bills paid." Second is to accept people's individuality. One size does not seem to fit all. Third, financial management teaching must address the mental processing being done. Fourth, teaching financial management means recognizing the objectives of safety, control and comfort of the financial manager. Systems must offer tools such as those seen: putting unpaid bills in plain sight; jotting due dates on the calendar; and using aids such as automatic payments and developing others such as Goetting's and Ward's check register (1994), having due date stickers included with a bill; having perpetual calendar pages with due dates already marked; or financial calendars that allow dollar amounts of bills to be noted at a glance.

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Personal Information Privacy Issues Relating to Consumption in the U.S. Marketplace

Information exchange is a two-edged sword, producing both consumer benefit and threat to personal privacy. Consumers, regulators, and firms will continue to struggle with the meaning of personal privacy in the information age until clear definitions are set, monitoring and enforcement rules put in place and tried in courts. A Consumer Personal Information Flow Cycle (CPIFC) is introduced to map diverse categorical areas of personal information disclosure, storage and manipulation of the personal data and the integration of varied databases. The Consumer Personal Information Flow Cycle provides a beginning framework for capturing the scope of personal privacy information and the processes by which information is traded. The cycle is used to identify points where privacy may be violated, where research is needed, where regulation and monitoring might be effective and where educational intervention is appropriate.

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Introduction

The electronic dossier, which is available to anyone with access to the Internet, is only one of the many potential sources of privacy invasion. In this paper, information privacy is defined as it relates to consumers. Next, three types of threats to personal privacy are identified. Lastly, a Consumer Personal Information Flow Cycle (CPIFC) is proposed to map a) categorical areas of personal information that individuals give away during activities of daily life, b) information storage and manipulation, and c) integration of varied databases.

Defining Privacy

Personal privacy has concerned American citizens long before the 1990's Information Age and the U.S. Office of Consumer Affairs declared it a major 1997 agenda item (Equifax-Harris Consumer Privacy Survey, 1996). The debate surrounding the exact definition(s) of personal privacy can be traced back to legal scholars Samuel D. Warren and Louis D. Brandeis (later a Supreme Court Justice) (Larson, 1992). They were the first to define privacy as "the general right to be left alone" in an 1890 Harvard Law Review article (Warren & Brandeis, 1890, p. 193). Brandeis and Warren were among a handful of individuals, before the 1970's, to make comment on something that many speculators of the next congressional election view as a potential hot issue (McLean, 1995).

Traditionally, privacy has been defined by physical things like walls or the distance of a whisper (Dunn, 1997). The U.S. Constitution makes no reference to, and has no clear definition of, privacy as an American right (Larson, 1992). Therefore, the task of defining privacy as it pertains to the individual consumer is not easily accomplished. "Privacy, like an elephant, is more readily recognized than described" (Young, 1978, p. 2). There are many different definitions of privacy that articulate individual interpretations. Philosophers, psychologists, sociologists, journalists, legal scholars, business professionals and consumers attach a different meaning to privacy. However, two common themes emerge from definitions and meanings assigned to privacy: accessibility (Bok, 1982) and control (Smith, 1979; Brandeis, 1890).

With regard to accessibility, Sissela Bok defined privacy as a "condition of being protected from unwanted access by others--either physical access, personal information or attention" (1982, p. 11). Access has to do with aspects of consumption which directly apply to such practices by marketers as observing consumers' purchasing behaviors and recording of brands purchased. Accessibility, however, is only part of the privacy issue.

Robert Ellis Smith's definition of privacy emphasizes the other common theme, control. "Privacy is the right to control information about yourself, as in the right to prevent disclosure of private facts or the right to know which information is kept on you and how it is used" (1979, p.323). Control-based definitions are more comprehensive than access-based definitions but may not be useful for policy (law or business) because they are too broad. In fact, the idea of privacy being a right in a computerized, free market is a difficult position to argue. Consider this: Over "111 million Americans rely upon the convenience and diversity of products when shopping by phone or mail" (United States Department of Commerce, 1995, p. 20). Consumers who are attracted to this type of shopping, business argues, give tacit support to practices such as profiling (collecting personal information on specific households from many different sources to predict propensity to purchase certain products) which help make it easier to find consumers who would be interested in unusual assortments typical of mail order.

What is needed is a definition of privacy that combines aspects of both access and control. The definition should cover the many acts defined as consumption and make clear the type of control (direct or indirect) and at what point (before, after, during a transaction) control should be monitored and regulated. It is not the goal of this discussion to put forth a specific definition, but rather to reveal a void in the field of consumer research for a definition of privacy.

For this paper, "information privacy" includes consumers' need to have access to their information protected and to be able to control personal information (United States Department of Commerce, 1995). Personal information is based on three sources: "public records; internal records--records collected directly from the individual by the profiler; and external records--records obtained by the profiler not directly from the individual but from some third party" (p. A-3). Information privacy is "an individual's claim to control the terms under which personal information (information that can be linked to an individual or household) is acquired, disclosed, and used" (p. 7-8).

Threats to Personal Privacy

On the surface, the collection of personal information by institutions in particular settings may seem innocuous. Institutions have specific purposes behind assembling these data bases. These purposes include existing product revision and testing, new product development, and niche marketing. Part of the cost to consumers, when they purchase a good or service, is the sacrifice of personal information which can lead to the invasion of their privacy (MacNeil, 1992). The unspoken, but normative, expectation is that personal information, disclosed through acquisitional transactions, will mutually benefit the consumer and the institution. In many instances, the use of credit cards as a payment mechanism produces automatic behavior on the part of the consumer. As a result, consumers, particularly in routine purchases, may not evaluate the type or extent of information provided and the benefit or detriment that could occur to them.

The relationship of information disclosure by consumers and acquisition by institutions necessitates a closer examination of potential privacy threats. Three major threats to privacy occur in information transactions. First, the individual loses control when personal information is shared. Second, when extraneous data is obtained (data not necessary to the transaction), data surplus is generated. Third, personal information, once acquired, is the property of the institution to store, manipulate, and sell without consumer knowledge or consent.

The first threat to privacy, loss of control, results from the "mere awareness" that strangers may have of certain types of information. Loss of control is more than just other people knowing individual salary range, age, telephone number, and the number of kids in the family. Information may include physical or mental ailments that could cause embarrassment, injury to personal ego, social harassment or employment discrimination (United States Department of Commerce, 1995). This information might also include criminal convictions, divorce settlements, lottery winnings, medications taken, and sexual preferences.

The second threat to privacy occurs when institutions obtain more personal information than they need to meet consumer expectations. For example, a mail order catalog will need a credit card number to bill and a telephone number to reach the consumer should they have questions about the order, but they do not need a bank account number. Similarly, a local store may invoke certain price savings if a consumer furnishes a name, address, and social security number. The name and address are necessary to identify the consumer for future savings. The disclosure of a social security number denotes no direct benefit to the consumer yet to firms interested in creating consumer databases the social security number is the only unique consumer characteristic. Both the bank account number and the social security number are extraneous to their particular transaction. The institution has generated surplus information that can be traded to other institutions.

The third threat to privacy is the manipulation and transfer of personal information to other institutions which may use it "improperly, unfairly or for purposes other than those intended by the individual" (United States Department of Commerce, 1995, p.3). For example, a security number given as extraneous information in the previous example can be used by the institution to make more sellable the original data given. This violates the concept of mutual benefit in the acquisition transaction because it is the use of data beyond the original purpose. Improper usage of personal information data, for purposes not originally intended, brings into focus issues of storage, manipulation, integration and ethical transfer.

Consumer Personal Information Flow Cycle

The Consumer Personal Information Flow Cycle (Figure 1) captures the relationships between consumers and institutions and among institutions as information is exchanged. The cycle consists of three levels of information exchange and processing plus feedback recirculation. The first level, consumer settings and activities, triggers the information exchange process. In the second level institutions store and manipulate personal information data for their own uses. The third level, integration, combines the institutional buying and selling of personal information data and integrates the obtained data into their own data bases. Although threats to privacy can occur at all three levels, the third level, integration (the trading of data to create new sets) is the newest and most controversial.

The Consumer Personal Information Flow Cycle begins with ten major categories of daily life activities that require pieces of personal information from consumers. These data bits are stored in a form that can be linked back to an individual's identity. The first level, consumer settings and activities, represents areas of disclosure of personal information (by consumers) and its acquisition (by institutions). When institutions ask consumers to reveal personal information, it is with a specific intent and purpose. For example, the bank request for salary and current debt load assists in determining how much debt a person can handle when applying for a loan. Accurate information is essential in keeping the costs of credit low for consumers overall. The settings and activities shown at level one often require consumers to disclose personal information in order to complete the transaction (i.e., to gain access to a product (loan) or exercise citizenship (voter registration)). The nature of some of these transactions actually deem the disclosure of information itself as payment for a product sought by a consumer. For example, a supermarket shopping discount card gives cents off products or free products for the cost of consumer personal information that is given each time the consumer swipes their card and allows the retailer's database to collect the brands they prefer. The same transaction occurs when citizens give their name, address and birth date for the right to vote in a government election.

The second level of the Consumer Personal Information Flow Cycle represents the storage and manipulation processes which occur after personal information is disclosed and acquired. This level utilizes sophisticated technologies and information management systems to inform the institution about the characteristics of their consumers. Information privacy is not violated at the storage point if personal information has been used for purposes originally stated or it is combined with other consumer information to present aggregate information. The dotted lines between institutions indicate the incompleteness of firm information and the desirability, from the firm perspective, of obtaining additional information from other firms.

In data manipulation, statistical techniques are employed to develop models of consumers (Pride & Ferrell, 1997). These models assist firms in their analyses of what, how, when, how much, and how often particular products are used/purchased/solicited. A compilation of buying characteristics with such personal information, as name and address, represent a consumer profile. When there is a lack of personal information needed for the statistical model to be computed, then the institution may seek the information by asking the consumer directly, or the institution may seek it in another, outside (secondary) database. The cost of directly asking consumers for the information in terms of trust and actual dollars usually discourages the direct acquisition approach. Moreover, institutions may want to learn details that a consumer may not wish to reveal such as age, race, religion, and sexual orientation (Larson, 1992). As institutions seek to enrich their own databases to improve the accuracy of consumer profiles, secondary sources become a viable and cheap solution.

When institutions seek enrichment of data from outside sources, the third level, integration, is activated. This is where the exchange of data sets and access to public information through the Freedom of Information Act are combined to create new data bases. In the transition from the second level of storage and manipulation to the integration level, value in dollars is placed on data. Information becomes a commodity that is traded, bought, and sold in a $3 billion per year market (United States Department of Commerce, 1995, p. 3). Institutions may choose from over a thousand commercial databases for secondary information (Piller, 1993). Occupations like list compiler, profiler and list broker are common. Technology methods, such as matching and enrichment, are examples of the efficiencies that can be achieved in database profiling for better consumer targeting. Matching is done when personal information contained in individual records are given codes that identify the type of information. Name, address, social security number and frequency of purchase are just a few examples of information that is coded. The advantage of coding is two-fold. When integrating databases, duplicate names and addresses can be eliminated. This saves money and eliminates consumer frustration over duplicate mailings (Stone, 1996). The integration of original and secondary databases at great speed is also advantageous, creating economies of scale for large commercial databases like Donnelly Marketing, Inc. Among the most efficient, Donnelley boasts over 150 million individuals in their database (United States Department of Commerce).

Enrichment of data involves two databases. Enrichment is what occurs after two separate databases have been matched. The addition of information (demographing and psychographing) beyond a name and address will add to an institution's understanding of its consumers. "In essence [enrichment of] a database lets you learn more about your customers and why they buy so you can nurture your relationship with them for many profitable years" (Stone, 1996, pp. 187-188). Large storage capacity and greater computing capabilities have improved institutional capacity to integrate data received originally from consumers with data bought from outside the institution.

It is at level three; when the information is traded, that it "turns an ethical corner." The personal information that was acquired and disclosed for one purpose can be used for purposes other than originally intended. When internal databases, as shown in the model, are expanded to include personal information from public (government) and private (commercial) sources, both institutions--the one selling or trading the data and the one receiving the data--may violate proper usage in the information privacy definition. For example, data given by consumers that was originally intended to qualify them for a drivers license or I.D. card, containing what type of car driven, insurance carrier, convictions for a felony or DWI, etc., can be sold for direct marketing purposes in the majority of states (Larson, 1992).

After enrichment, matching and profiling are complete, the new data base can be used to reconnect with consumers in a new way, creating a feedback loop from the firm or institution to the consumer. The firm now has a better idea of who their target market is from the integration of secondary databases and statistical modeling. It can then respond to this new information by improving existing products or creating new ones to better satisfy consumer needs and desires. The institution may also improve the quality of targeting consumers that may be interested in their products, improving the effectiveness of direct mail, telephone and computer solicitations.

When integration is effective and well-received by consumers, convenience, rather than privacy violation, occurs. The right product has reached an interested consumer. Sometimes, integration is successful but the offer itself is untimely and the consumer "trashes" the product offer. When integration has erred by the usage of old data (you are now married) or incorrect data (misspelled names), the profile is statistically incorrect (a vegetarian receives offers for steaks by mail), and the consumer may feel threatened, frightened, violated, insulted, angry or simply annoyed. In some instances, the consumer will react aggressively by contacting the Federal Trade Commission, the Direct Market Association, or a private association to have their name removed from secondary use altogether. The 1996 Consumer Privacy Survey by Equifax-Harris recorded a four-point increase in concern of personal privacy issues (Equifax-Harris Consumer Privacy Survey 1996).

The boundaries of privacy have been altered by market competition for consumers and by computer technologies. Information exchange is a two-edged sword, producing both consumer benefit and a threat to personal privacy. Integrated information may be accurate, but considered an invasion of personal privacy. If the Internal Revenue Service integrates all data, will citizens think of this as a convenience or as surveillance? Consumers, regulators, educators and firms will continue to struggle with the meaning of personal privacy in the information age until clear definitions are set, and monitoring and enforcement rules are put in place and tried in courts. Integration is a complicated concept for consumers to grasp. The Consumer Personal Information Flow Cycle provides a beginning framework for consumer educators, businesses, policymakers, and regulators to develop appropriate education and business practices. Many institutions think that silence among consumers is tacit support for information gathering and integration practices. Without additional research, it is impossible to know the extent to which consumer privacy is being violated. A compilation of flagrant abuse of information is a first step toward finding common ground for delineating privacy issues. Deeper understandings of how third party information exchange affects individuals and where society wants to draw the line on privacy definitions are necessary for appropriate education and regulatory interventions to be put in place.

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Endnote

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Shopping for a Credit Card: Does Information Search Pay Off?

A wide price dispersion in credit card interest rates has made searching for information critical for many consumers. Using the 1995 Survey of Consumer Finances, two measures of payoffs to search were estimated. First, a measure of savings was calculated based on the highest and lowest credit card interest rates. Second, the relationship between consumers' search and credit card interest rate was examined. Both analyses provide empirical support for significant payoffs to search in the credit card market.

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Credit card lending is a competitive market with thousands of card issuers, all free to establish their own prices and other lending terms (Federal Reserve Board, 1994, 1997). While competition in the 1980s focused on efforts to broaden customer bases by increasing the availability of credit to higher risk consumers, competition in the 1990s has focused on interest rates, resulting in declining credit card interest rates in the marketplace (Cargill & Wendel, 1996; Federal Reserve Board, 1997). Also, with more sophisticated marketing tools based on credit scoring, more bank card issuers exercise price discrimination with interest rates, segmenting the market into primary lending and sub-prime lending (Federal Reserve Board ,1997). These recent changes in the credit card market have created greater price dispersion in interest rates, providing an important reason for consumers to shop around.

Several researchers (Ausubel, 1991; Cargill & Wendell, 1996; Chang & Hanna, 1992) argued that borrowers do not search for low credit card interest rates. Reasons include convenience use (i.e. interest rates are irrelevant because consumers pay in full) or low expected value of savings. However, recent data show that between 1992 and 1995 a higher proportion of consumers revolved balances and the average value of those balances has increased (Chimerine, 1997). If credit cards are used as a financing mechanism instead of a medium of convenience, the interest rate of the credit card should be an important determinant of the consumers' choice of which credit card to hold.

Furthermore, the cost of information search on credit cards' interest rates has declined. In 1988 the U.S. Congress passed the Fair Credit and Charge Card Disclosure Act (D'astous & Miquelon, 1991; Federal Reserve Board, 1994). This act amended the Truth in Lending Act to expand disclosure requirements for applications and solicitations mailed to consumers for credit cards, thereby making consumers' comparison shopping easier. More information is coming directly to consumers in the form of direct marketing mail solicitations, which reduces consumers' search costs. An estimated 2.5 billion direct mail solicitations were sent by card issuers during 1996 (Daly, 1997).

In this credit card market with wider price dispersion, greater anticipated savings, and lowered search cost, consumers' search activities are expected to payoff. The purpose of this paper is to explore whether consumers shop for credit and the relationship between search and the payoff to search as measured by the annual percentage rate (APR) of the major credit card a consumer holds. Findings can help consumer educators communicate the potential savings more effectively to consumers. Also, considering concerns about the quality of information provided by credit card issuers, it is possible to analyze whether information provided by the Fair Credit and Charge Card Disclosure Act is helpful to consumers.

Previous Studies

Consumer Credit Search Behavior

Information search behavior has been the focus of numerous researchers in the past. However, there have been few studies of search behavior as it relates to services (versus goods, see Schostack, 1977), such as credit borrowing and savings account (Chang & Hanna, 1992).

Stigler's (1961) seminal work on the economics of information explained market price dispersion as the major reason for consumers to engage in information search. Consumers can close price gaps by searching for price information, but at some cost in terms of time and money. According to the economics of information theory, a consumer will search for lower prices as long as the marginal benefits from additional search exceed the marginal costs of search.

Chang and Hanna (1992) discussed the benefits and costs of search for credit, including immediate benefits such as a lower interest rate and finance charge and indirect benefits including better money management, greater savings and convenience from using appropriate credit, and gains in financial knowledge and experience gathered from the search process. The costs of search include the opportunity cost of time (lost wages) and physical and mental effort spent in search process.

In studying consumer's search for a credit card, it is important to distinguish between "convenience" and "revolving" credit card users since information search patterns may depend on how consumers plan to use their credit cards. "Convenience" users utilize credit cards mainly as a mode of payment and typically pay the balance in full upon receiving the account statement, while "revolving" users use the card principally as a mode of financing and elect to pay interest charges on the unpaid balance (Mathews & Slocum, 1969). Thus, for revolvers, it is preferable to have a card with a low interest rate, while for convenience users, a low interest rate is not as important.

Payoffs to Search

Previous researchers indicated that a positive relationship exists between the overall amount of information search undertaken and consumer efficiency. Sproles, Geistfeld, and Badenhop (1978) provided empirical evidence that information improves consumers' abilities to evaluate product quality. Therefore, in the credit market, it can be hypothesized that consumers' search enhances their abilities to evaluate alternative credit cards. However, what consumers shop for can be different for "convenience" and "revolving" users. Consequently, the revolvers who search more extensively should find and choose a credit card with lower interest rate, while the convenience users who engage in extensive search should find a card with the desired feature such as no annual fee.

Morris and Bronson (1970) and Cude (1987) estimated the returns to search using data from 637 *Consumer Reports* product tests between 1961 and 1968 and data from 929 product test in *Consumer Reports* between 1975 and 1984, respectively. Although Morris and Bronson's (1970) and Cude's (1987) definitions of the worst and the best choices are different, the following measure of 'percent monetary loss' was used in both of the studies as a proxy for the potential payoff to search.

$$\text{Percent Monetary Loss} = \frac{\text{The Best Choice} - \text{The Worst Choice}}{\text{The Worst Choice}} \times 100$$

Methods

Theoretically, consumers' search improves consumer efficiency. In this paper, payoffs-to-search are estimated in two ways. First, Cude's (1987) potential payoff of search measure, percent monetary loss, is calculated based on the best and the worst credit card interest rates. The best choice is the credit card with the lowest interest rate, and the worst choice is the credit card with the highest interest rate. It should be noted that credit card price also involves other elements, including annual fees, fees for cash advances, rebates, minimum finance charges, over-the-limit fees, and late payment charges. In addition, the length of the "interest-free" grace period, if any, and the type of billing cycle can have an important influence on the amount of interest consumers pay when they revolve balances on their credit cards. Acknowledging this limitation, the percent monetary loss was calculated.

Second, it is hypothesized that more shopping or searching will result in a lower interest rate and thereby saving money on interest payments for revolvers, but not for convenience users. In order to test this hypothesis, the credit card annual percentage rate (APR) was estimated separately for revolvers and convenience users using the Ordinary Least Squares analyses including information search and other influencing factors as independent variables. In this study, revolvers were defined as the credit card holders who carried outstanding balances after the last payment, while convenience users were those who paid off the credit card charges. The differences between revolvers and convenience users was examined by estimating a full interaction model (Maddala, 1992). In this section, a description of the data set is presented, and variables and analytical procedures employed in the OLS analyses are discussed.

Data

The 1995 Survey of Consumer Finances (SCF) is a triennial survey sponsored by the Federal Reserve with the cooperation with the Statistics of Income Division of the Internal Revenue Service (Kennickell, 1997; Kennickell & Woodburn, 1997). It is designed to provide detailed information on U.S. families' balance sheets, their use of financial services, and demographics; there is some limited information on shopping behaviors with respect to credit and savings decisions. For the 1995 SCF survey, 4,299 households were interviewed by the National Opinion Research Center at the University of Chicago between July and December.

The SCF collects information on whether consumers "almost always, sometimes, or hardly ever pay off the total balance owed on the account each month." Another question asks: "after the last payment was made on this account, what was the balance still owed on this account?" We use the later, more objective measure to classify respondents. In this study, households who reported a $0 balance after their last payment were considered "convenience users" and household with a positive balance were classified as "revolvers." Just over two-fifths (40.8 %) of respondents were convenience users (59.2% were revolvers); this is comparable to industry figures of about 40 percent of account holders who are classified as "transactors" or "convenience users" as opposed to revolvers.

Variables

Dependent Variable. As payoff to search, the Annual Percentage Rate (APR) of the primary credit card, including bank-type cards, store-related cards, and other credit cards was employed as the dependent variable. If consumers held only one card, this card was considered their primary card. If consumers reported outstanding balances on their credit cards, the card with the largest balance was considered the primary card. If consumers held multiple cards and did not carry a balance, the most recently acquired credit card was considered primary.

Independent Variables. Independent variables in the multivariate analysis fell into categories of information search, credit history, credit card use pattern, and demographics. To identify the extent of information search, the following question was asked: "when making major decisions about credit or borrowing, some people shop around for the best terms while others don't. What number would you/your family be on the scale?" The extent of information search was measured on five-level ordinal scale (1 = almost no shopping, 5 = a great deal of shopping).

The borrowers with a bad credit history may face a higher interest rate because of their poor credit records, regardless of their information search efforts. The 1995 SCF gathered data regarding whether respondents had been turned down for a loan application or obtained a smaller loan than they applied for. The borrowers who reported either of these incidents were identified as having a bad credit history. This was coded as a 0-1 dummy.

Credit card issuers price discriminate according to consumers' credit card use patterns. Previously, a discrepancy has been found between consumers' reported tendency to payoff credit card balances and observed use of credit cards as a convenience medium (Ausubel, 1991). Although the payoff to search was separately investigated for revolvers and convenience users, in order to capture this potential discrepancy, respondents' reported level of payoff was also included as an explanatory variable (1 = almost always payoff, 3 = hardly ever). Number of credit cards is another measure of credit card use patterns; it is the absolute number of bank-type credit cards reported by the respondent. If consumers have more than one credit card, they are more likely to put their outstanding balance on credit card which has the lowest interest rate.

Finally, a set of demographic variables were included to capture their possible impacts on interest rate: (a) *age* of reference person (b) *household income*: The natural logarithm of the reconciled annual total household income before taxes was used. (c) *female headed household*: male headed as the base. (d) *race-ethnicity*: The respondent's race was categorized into Hispanics, Blacks, other nonwhites, and non-Hispanic whites (base). (e) *education*: a set of dummies were included with high school graduates or equivalent as the base: other categories were less than high school, some college, B.S., and graduate degree. (f) *marital status*: Three dummy variables, divorced or separated, widowed, and never been married, were included with married or living with a partner as the base. (g) *size of household*: The number of people in household was employed. (h) *region*: 9-level Census Division code was employed for region: Northeast-New England Division (CT, ME, MA, NH, RI, VT); Northeast-Middle Atlantic Division (NY, NJ, PA); South-South Atlantic Division (DE, DC, FL, GA, MD, NC, SC, VA, WV); South-East South Central Division (AL, KY, MS, TN); South-West South Central Division (AR, LA, OK, TX); Midwest-East North Central Division (IL, IN, MI, OH, WI); Midwest-West North Central Division (IA, KS, MN, MO, NE, ND, SD); West-Mountain Division (AZ, CO, ID, MT, NV, UT, WY, NM); West-Pacific Division (AK, CA, HI, OR, WA) as the base.

Analysis

Because of the sampling frame, the data must be weighted when generating descriptive statistics (Kennickell & Woodburn, 1997). In the multivariate analysis, special techniques, repeated-imputation inferences (RII), must be employed to account for the five implicate data sets (Kennickell, 1997; Montalto & Sung, 1996). Thus, two separate Ordinary Least Squares (OLS) analyses were run to estimate the APR for revolvers and convenience users, using RII technique. We also examined the differences between revolvers and convenience users by estimating a full interaction model (Maddala, 1992). In the full interaction model, a new variable was created to match each independent variable by multiplying the revolving dummy (whether a respondent carries any outstanding balance or not at the end of billing cycle) by each variable. These interaction terms were added to the set of independent variables, and this full interaction model was estimated using the full sample (all credit card holders). In each case where the estimated coefficient for the interaction term was significant with 95 percent confidence there was evidence of a statistical difference between the revolvers and the convenience users with respect to that independent variable.

Results

Descriptive Statistics

Among 4,299 consumers, 75 percent of all respondents said that they had at least one credit card, and 89 percent of the credit card holders reported the APR of their primary credit card. Among these credit card holders, 59.2% carried an outstanding balance after the last payment was made, while 40.8% of the card holders were convenience users.

Respondents showed diversity in their information search behavior. When making major decisions about borrowing, 16% of credit card holders did almost no shopping, while 23% did a great deal of shopping. Comparing the revolvers' extent of information search with that of the convenience users, the revolvers seem to search more extensively than the convenience users; 12% of the revolvers did almost no shopping, compared to 23% of the convenience users.

Payoff to Information Search: Percent Monetary Savings

As expected, consumers reported a wide price dispersion in terms of the APR of their primary credit card, with interest rates ranging from 2.9 percent to 29.0 percent. The mean and median of APR were 14.5 and 15.0, respectively with variance of 18.41.

Adopting Cude's (1987) measure of the potential payoff, the percent monetary loss was calculated. In this case, the price of the best choice is the lowest APR, and the price of the worst choice is the highest APR. The calculated value for the percent monetary loss in the credit card market was 900 percent, indicating a huge potential payoff of search.

However, this may overstate the benefits somewhat since these rates may include "teaser" introductory rates on some credit cards at the lower end and may include some non-traditional lending in the sub-prime markets at the upper end. We can use the 10th and 90th percentile interest rates, 7.9 percent and 19.0 percent respectively, to more closely reflect the market most consumers face. We find that the percent monetary savings is estimated at 140 percent, still a substantial savings. For a consumer who revolves an "average" amount (a median of $1,500 in 1995), the monthly interest charge would be $9.87 versus $23.75, a savings of $13.88 per month.

Payoff to Information Search: APR

The RII of the OLS results are presented in Table 1. Results which were consistent across the five separate implicates were confirmed in the R.I. results, although the levels of significance were generally more stringent under the R.I.. Among the independent variables, the extent of information search, bad credit history, marital status, and the regional variables were found to significantly influence the revolvers' APR, while only the number of credit cards was found to influence the convenience users' APR. The full interaction model supports the difference between the revolvers and the convenience users. According to the full interaction model, statistically significant differential effects were noted for information search, bad credit history, number of credit cards, race, and marital status.

The extent of information search lowered the revolvers' interest rate significantly, but not the convenience users'. Holding all other variables constant, revolvers who did a great deal of search paid 146 basis points less than those who did no shopping and 73 points less than those who did a moderate amount of shopping. As expected, having a bad credit history raised the revolvers' APR by 95 basis points, holding all else constant. In terms of credit card use patterns, neither self-reported level of payoff nor the number of credit cards were significant for the revolvers. On the other hand, the number of credit cards was found to be significant for the convenience users. Among the demographic variables, marital status of the reference person was found to be significant. Widowed revolvers were found to pay a lower APR than married revolvers. Finally, the residents of Pacific West were found to pay more than 131 basis points more than New England and West North Central residents.

Table1.

RII (Repeated Imputation Inferences) of OLS Regression Results of APR: Parameter Estimates (P-Value)

Independent Variables	Revolvers	Convenience Users	$\beta_{Ri} \neq \beta_{Ci}$
Intercept	17.2280 (0.0000)	14.5489 (0.0000)	
Extent of information search	**-0.3661 (0.0003)**	-0.0082 (0.9058)	*
Bad credit history	**0.9457 (0.0015)**	-0.2350 (0.5847)	*
Credit card usage characteristics:			
- Level of payoff	0.0853 (0.2702)	-0.0246 (0.9068)	
- Number of credit cards	-0.0978 (0.1471)	**-0.2618 (1.3796E-6)**	*
Demographics			
- Age of reference person	0.0042 (0.6981)	0.0109 (0.2013)	
- Household income	-0.1175 (0.2193)	0.0821 (0.1779)	
- Female headed household	-0.2382 (0.5321)	-0.1901 (0.6203)	
- Race (Non-Hispanic White as base)			
Black	0.0229 (0.9590)	-0.0178 (0.9822)	
Hispanic	0.4432 (0.4160)	-1.5564 (0.2057)	
Other Non-Whites	1.0553 (0.0887)	-0.4932 (0.2658)	*
- Education (high school graduates as base)			
Less than high school	-0.4228 (0.4545)	-0.5342 (0.3063)	
Some college	-0.1963 (0.1058)	-0.1255 (0.7330)	
B.S.	-0.3802 (0.2786)	0.0466 (0.8930)	
Graduate degree	-0.4886 (0.2515)	0.1336 (0.4598)	
- Marital status (married or living with partner as base)			
Divorced/Separated	-0.6962 (0.1058)	0.0912 (0.8076)	
Widowed	**-1.5533 (0.0302)**	0.3172 (0.4598)	*
Never been married	0.0624 (0.5287)	-0.1711 (0.7103)	
- Household size	0.0624 (0.5287)	0.1256 (0.1919)	
- Region (Pacific West as base)			
Northeast: New England	**-1.3098 (0.0241)**	0.2741 (0.6320)	
Northeast: Middle Atlantic	-0.2745 (0.5520)	-0.2643 (0.5612)	
South: South Atlantic	-0.8006 (0.0617)	-0.6882 (0.0731)	
South: East South Central	-0.0078 (0.9895)	-0.3468 (0.5828)	
Midwest: East North Central	-0.5879 (0.1532)	-0.0019 (0.9959)	
Midwest: West North Central	**-1.3094 (0.0150)**	-0.5064 (0.3980)	
West: Mountain	-0.5805 (0.3551)	0.1081 (0.8390)	
F-Statistics	**2.3516 (0.0001)**	**1.5163 (0.0466)**	
Degree of freedom	26	26	

* implies significance of the variable in the full interaction model, thus $\beta_{Ri} \neq \beta_{Ci}$

Conclusions and Implications

Payoffs to consumer search in credit card markets were investigated using the 1995 Survey of Consumer Finances data. Credit card holders showed diversity in their search behavior. Facing major borrowing decisions, 16% of borrowers did almost no shopping, while 23% did a great deal of shopping. Using Repeated Imputation Inferences (RII) techniques with Ordinary Least Squares analyses, the relationship between the extent of information search and its payoff was found to be positive for revolvers but was not significant for convenience users. Information search paid off for revolvers: revolvers who searched more tended to have credit cards with lower APRs and saved money in annual interest payments. On the other hand, the extent of search reported by convenience users was not related to credit card APR, an indication that they shop for other features such as annual fee or rebates.

Calculations on price dispersion in credit card markets show that consumers can save substantially by shopping more for credit card interest rates. Consumer educators can help consumers understand the benefits of saving even a few basis points on their interest rates. For example, we calculated a 140 percent savings between the 10th and 90th percentile interest rates and a savings of $13.88 per month in interest. If consumers even moved from the 90th percentile (19.0%) to the median (15.0 %), they could save $5.00 per month in interest charges if they had average balances. Carrying out this calculation over a year could help consumers understand the opportunity cost of not shopping for the best --or even an average-- interest rate.

From policy perspective, it seems that disclosures have been effective in helping consumers who revolve to shop for credit cards with lower interest rates. It is less clear if convenience users are able to use current disclosure information in their shopping. Open end credit products like credit cards are relatively easy to understand because the APR is identically the contract interest rate consumers pay, although cash advance fees, late fees, over-the-limit fees and annual fees are also a part of the total cost of credit. In many other closed end credit products, such as mortgages and installment loans, the APR and the contract interest rate are not the same. Consumer shopping for these products needs to be studied to see if disclosures are equally effective.

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Endnotes

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The Debt Structure of Small Business Owned by Women in 1987 and 1993[1]

This study examines the access of women-owned small business borrowers to financial capital in 1987 and 1993 using the National Survey of Small Business Finances. Results indicate that while women-owned small businesses have gained similar access to line-of-credit loans from commercial banks as men-owned small businesses.

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Introduction

An important phenomenon in the U.S. economy in the last twenty-five years has been the rapid growth of women-owned businesses. In 1972, women owned less than five percent of all businesses and produced less than one percent of total sales (Bureau of the Census, 1976). Based on recent estimates of small business activity, women-owned businesses now comprise 27 percent of the 5.5 million small businesses (Cole, Rebel, & Wolken, 1995). Even though women ownership of small businesses has increased significantly over the past 25 years, many women who own small businesses claim they have less access to the market for financial capital than men-owned small businesses.

While previous literature has offered no evidence of price discrimination in financial capital markets, advocacy groups still claim that women business owners face discrimination (NFWBO, 1993). If real discrimination occurs in the market for financial services, one would expect women-owned businesses to receive less favorable treatment by lenders than men-owned businesses, even when the quality of the businesses is the same. The borrower could receive less favorable treatment by paying higher loan prices; being offered smaller loan amounts; being refused credit from a mainstream lender which makes it necessary for the borrower to search for non-conventional lenders; or, being offered only non-traditional debt instruments. The purpose of this study is to determine if women-owned small businesses had less access to line-of-credit loans from commercial banks in 1987 and 1993 than men-owned small businesses.

Literature Review

The literature has offered conflicting evidence on the relative financial success of women- and men-owned small businesses. Several reasons have been cited for the relative financial disadvantages realized by women-owned businesses. The most persuasive reasons suggest that women-owned businesses are relatively small, the business owners lack relevant business experience and they tend to be concentrated in business classifications earning relatively low profits (Aldrich, Howard, & Auster, 1986; Aronson, 1991; Loscocco, Robinson, Hall & Allen, 1991).

Other authors suggest that men and women-owned small businesses have similar financial characteristics. In the rural economy, women-owned businesses appear to have significantly lower gross sales than men owned small business; however, the factors influencing the business' success are the same for women- and men-owned small businesses (Tigges & Green, 1994). When examining women-owned businesses in specific service industries (e.g., food and drink, computer and software sales and health), women-owned businesses are similar to men-owned businesses in earnings, earnings growth rates, and business failure rates (Kalleberg & Leicht, 1991).

This literature on the financial success of women-owned businesses suggests that they are less successful financially than men-owned small businesses, except in specific industries. Apart from the demographic characteristics of the business (size, age and Standard Industrial Classification), women-owned business may not be given the opportunity to succeed because of the lack of financial and human capital resources. Ando (1985) dismissed the notion that men and women face differential access to financial credit; however, she did find that divorced women have more credit difficulties than non-divorced women. More recent research has found that women-owned businesses do not appear to pay higher loan prices or face more stringent collateral requirements (Haynes, 1995).

Research in the early 1980s suggested that women-owned businesses were undercapitalized primarily because banks were reluctant to lend money to them (Hisrich & Brush, 1984). The lack of success in securing adequate financial resources was blamed on the high percentage of women-owned businesses in low growth, highly competitive industries (Humphreys & McClung, 1981). In addition, women may lack the managerial experience and access to key information networks that would increase the probability of success (Hagan, Rivchun, & Sexton, 1989). More recent research conducted on small business owners in Connecticut suggests that women-owned businesses often have a difficult time obtaining bank loans because they are young and have no track record of profitability or because they are service businesses and have few assets to use as collateral (Coleman & Carsky, 1996).

Even though no correlation has been established between the amount of debt held by a small business and their financial success, men owners appear to utilize significantly more debt than women owners (Schnerr, Sugrue & Ward, 1993). Women owners may simply prefer to hold less debt because they prefer less risk; however research by Master and Meier (1988) shows that risk preferences for men and women are very similar. Women owners may have other sources of debt (from family and friends), which enables them to utilize less debt from institutional lenders. In addition, women owners may employ a different funding strategy than men-owned business, which requires fewer financial resources (Carter, Williams, & Reynolds, 1997).

This literature has provided an examination of the access of women-owned small businesses to financial capital. However, the literature has not addressed the borrowing experience of women borrowers with line-of-credit loans from commercial banks, which is the gap in the literature addressed by this study.

Conceptual Considerations

Access to financial capital, or any other critical resource, is very likely to have profound effects on the profitability of the small business firm. Women borrowers may face other related forms of differential treatment in the financial services market, which can increase the cost of financial capital. If women-owned small businesses are unable to borrow from mainstream lenders, such as commercial banks, or acquire traditional loans, such as line-of-credit loans, then they may face higher transaction and search costs.

Commercial banks are the dominant source of all financial capital for small businesses. They offer a wide array of financial services demanded by most small businesses (such as checking accounts, night deposit facilities and credit card clearing) and they have offices in most communities. The wide array of financial services offered by commercial banks makes them a convenient and efficient place to purchase financial services. Hence, the transaction and search costs of purchasing the full set of financial services from commercial banks are normally lower than for other institutional and non-institutional lenders.

Lenders market several loan instruments to their borrowers based on the demands of the borrowers. Four loan instruments might be deemed traditional loans, including line-of-credit, vehicle, equipment and mortgage loans. Three of these traditional loans (vehicle, equipment and mortgage loans) are asset-backed loans and pose a minimal amount of credit risk to the lender. Line-of-credit loans are not asset-backed loans, hence the lender must solicit other forms of capital to secure these loans. Thus, a line-of-credit loan requires more confidence in the borrower's ability to repay the loan. In addition, the line-of-credit loan gives the borrower a source of credit that is less costly to utilize. While the other types of loans offered by the lender assume that the borrower will borrow a fixed sum of money and repay the loan at some defined time in the future, the line-of-credit loan allows the borrower to use as much of the line-of-credit as they deem necessary. During times of high cash demands the line-of-credit loan balance may approach the maximum allowed, while during times of low cash demands the line-of-credit loan balance may approach zero. If the rate of interest across all types of loans is the same, the total interest costs of line-of-credit loans should be lower than for other types of loans. Hence, borrowers who are unable to qualify for line-of-credit loans face times when they are paying interest on excess cash and subsequently incur higher loan costs.

The arguments addressed above suggest that borrowers unable to negotiate loans with institutional lenders offering a wide array of services (i.e., commercial banks) and borrowers unable to acquire line-of-credit loans realize higher costs of financial services. If this kind of differential treatment occurs across similar borrowers differentiated by gender only, then one could claim discrimination in the market for financial services. Unfortunately, this discrimination claim leaves out the most substantive form of discrimination, which occurs when applicants are completely denied credit and subsequently the business venture is never initiated. Using a Goldberg type procedure to assess whether women are discriminated against when seeking a business loan, Fay and Williams (1993) found that widely held perceptions that women experience gender discrimination seeking start-up capital were generally supported by the data.

The study is primarily concerned with the access of women-owned small businesses to line-of-credit of loans from commercial banks. Two hypotheses are addressed in this study and they are as follows:

(1) Women-owned small businesses have a lower probability of holding a line-of-credit loan with a commercial bank than men-owned small businesses; and,

(2) Women-owned small businesses a have lower proportion of their total debt outstanding with commercial banks in line-of-credit loans than men-owned small businesses.

Empirical Model

This study uses the 1987 and 1993 National Surveys of Small Business Finance to examine the hypotheses. Non-linear regression models are employed to assess the probability of acquiring a line-of-credit loan from a commercial bank and the share of total debt held by commercial banks in line-of-credit loans.

Data

This study uses the 1987 and 1993 National Surveys of Small Business Finances, surveys conducted by the Federal Reserve's Board of Governors in 1987 and 1993. A random sample of non-agricultural, non-financial businesses with less than 500 employees was surveyed each year. The response rate was just over 65 percent in 1987. Price Waterhouse implemented the survey in 1993 and achieved a response rate of about 50 percent. The 1987 data set provides detailed financial information on 3,405 randomly selected small businesses representing just over 3.5 million small businesses. The 1993 data set provides very similar information on 4,637 randomly selected small businesses representing 4.99 million small businesses. This study examines only small businesses with leases or loans outstanding, which includes 2,284 observations representing just over 2.3 million small businesses in 1987 and 2,969 observations representing just over 2.8 million small businesses in 1993.

Model

When assessing the probability of holding any debt, the primary dependent variable is dichotomous indicating whether the business has a line-of-credit with a commercial bank. When assessing the shares of total debt, the dependent variable is continuous variables indicating the share of total debt held by commercial banks in line-of-credit loans.

The primary independent variables are those chosen to measure the quality (i.e., credit riskiness) of the business and the gender of the business owner. Since credit-worthy high-risk borrowers may be denied a loan when credit is rationed, an appropriate measure of borrower quality is crucial. Embodied in this measure of quality must be the same criterion used by lenders to assess borrower quality, since lenders are the ones ultimately determining the quality of the borrower. This study measures business quality by using an Altman Z statistic derived from the financial statement information provided in the NSSBF. Undoubtedly, the Altman Z statistic is not the perfect measure of firm quality, even though similar, albeit proprietary, models are used in the financial services industry to evaluate loan quality.

The gender variable indicates whether or not the majority owner is a woman. In this study, more than 50 percent of the business must be owned by a women to be classified as a woman-owned small business.

In this model, the demand for financial capital is held constant, therefore the control variables capture other factors that may cause the demand for financial capital to change. When attempting to model the financial capital market for small businesses, non-financial and financial characteristics of the business, individual and market variables are employed as control variables. The independent variables used as control variables include the following: age of the business, number of employees, type of legal organization (i.e., corporation or not), standard industrial classification, rural or urban location, Census Region, and ethnicity of the majority owner(s).

The empirical models, using non-linear regression analyses, will estimate the probability that the borrower uses line-of-credit loans acquired from a commercial bank. In this instance, the dichotomous dependent variable, labeled BKLOC, indicates whether a line-of-credit was obtained from a commercial bank. The following model is employed to test whether women-owned small businesses have a higher probability of acquiring a line-of-credit loan from a commercial bank than men-owned small businesses:

$$\text{BKLOC} = \beta_0 + \beta_1 \text{ business quality} + \beta_2 \text{ firm and borrower characteristics} + \beta_3 \text{ financial market characteristics} + \beta_4 \text{ lease/loan type dummy variables} + \beta_5 \text{ total debt amount} + \beta_6 \text{ gender} + \varepsilon$$

Based on the conceptual framework, women borrowers are less likely to hold a line-of-credit from a commercial bank than men borrowers. Therefore, β_6 is expected to be negative.

Tobit regressions will be used to assess the determinants of the shares of total debt held in line-of-credit loans from commercial banks. This model assesses whether women-owned small businesses have a higher percentage of their total debt in line-of-credit loans from commercial banks than men-owned small businesses. A regression equation specified the same as equation above is employed, except the dependent variable is changed to

BKSHR, which is the proportion of total debt held by commercial banks in line-of-credit loans. Once again, the coefficient on the gender variable, β_6, is expected to be negative.

The gender coefficients on the regression equations for each year will be compared to determine if the borrowing experience of men and women small business owners in acquiring a line-of-credit loan from a commercial bank is more similar in 1987 than in 1993. The same regression models are used for both 1987 and 1993, hence the sign and statistical significance of the coefficients on the gender variable are compared to determine if the borrowing experience of women owners more closely parallels the experience of men owners in 1993 than in 1987 in acquiring line-of-credit loans from commercial banks.

Results

This study focuses on whether women and men-owned small businesses use the same lenders and debt instruments. Using a multivariate analysis, two models are employed to determine if women-owned businesses have a higher probability of using line-of-credit loans from commercial banks than men-owned small businesses.

Results show that when comparing women and men-owned small businesses, women-owned small businesses are somewhat newer and smaller businesses with a disproportionate share of these businesses engaged in retail trade in both 1987 and 1993. In 1987, women-owned businesses had a significantly higher proportion of firms less than five years old (20 versus 14 percent) and lower proportion of firms greater than 20 years old (24 versus 37 percent). In addition, women-owned businesses have a significantly higher proportion of firms with 5 or fewer employees (59 versus 50 percent); a significantly lower proportion of firms with more than 10 employees (20 versus 30 percent); a significantly lower proportion of firms organized as partnerships (4 versus 9 percent); and, a significantly lower proportion of firms engaged in construction (7 versus 13 percent) and wholesale (6 versus 11 percent); and, a significantly higher proportion of firms engaged in retail trade (35 versus 25 percent).

The same picture emerges in 1993. Women-owned small businesses have a higher proportion of firms less than 5 years old (27 versus 21 percent), a higher percentage of smaller firms (67 versus 60 percent), a relatively high percentage of sole proprietorships (39 versus 36 percent) and a disproportionate share of firms engaged in retail (27 versus 21 percent) and services (41 versus 31 percent).

Non-linear regression models are employed to assess the probability of holding a line-of-credit loan from a commercial bank and evaluate the proportion of total debt held in line-of-credit loans from a commercial bank. Two statistically significant results generated from the 1987 NSSBF warrant further discussion. First, women-owned small businesses had a lower probability of obtaining a line-of-credit loan from a commercial bank in 1987 than men-owned small businesses. Second, women-owned small businesses have a smaller share of their total debt in line-of-credit loans held by commercial banks than men-owned small businesses in 1987. By 1993, the structural model appears to have changed and statistically significant differences between women- and men-owned small business borrowers could no longer be shown for either the probability of obtaining a line-of-credit loan from a commercial bank or the proportion of total debt held in line-of-credit loans from commercial banks.

In summary, these results utilizing the 1987 data support the two hypotheses that women-owned small business borrowers have a lower probability and a smaller share of total debt held in line-of-credit loans from commercial banks than men-owned small business borrowers. However, the results utilizing the 1993 data do not support the two hypotheses. Over the period of time from 1987 to 1993, women-owned small businesses appear to have gained similar access to line-of-credit loans from commercial banks as men-owned small businesses.

Conclusions

This study has focused on the lending experience of women-owned small business borrowers. In 1987, women-owned businesses appeared to have less access to line-of-credit loans from commercial banks than men-owned small businesses. By 1993, access to line-of-credit loans from commercial banks appeared to be very similar to women- and men-owned small businesses.

Cross-sectional studies of this type should be viewed with caution. While this study includes variables deemed to be important determinants of the demand for financial capital, a key variable may be missing. If this missing variable is correlated with the gender variable, then the results of this study may change. In addition, this study utilizes the SAS software for estimating the linear and non-linear regression equations. The SAS algorithms do not compensate for design effects in weighted data, hence the standard errors for the regression coefficients may be underestimated.

Previous literature on women-owned businesses has examined the question of price discrimination in financial markets. The traditional approaches to examining price discrimination have defended the banking community's claim that no systematic price discrimination was occurring in the market for financial capital (Ando, 1986; Peterson, 1981; Haynes, 1995). However, those directly involved in women-owned businesses have aggressively defended their perception that women-owned small businesses face some degree of gender-based discrimination.

The access of women-owned small businesses to mainstream financial resources appears to have changed significantly from 1987 to 1993. While this study suggests that women-owned small businesses had less access to line-of-credit loans from commercial banks in 1987, this difference became less significant by 1993. Several reasons may underlie this change: (1) The women-owned small businesses applying for loans and leases in 1993 may have been better quality firms (lower credit risk); (2) Women owning small businesses may have had more educational and business experience in 1993 than in 1987; (3) Women-owned small business borrowers may have changed their preference for risk and chose to more aggressively solicit financial capital; (4) Women may be more active in businesses requiring more financing or own businesses with more assets to pledge as collateral; (5) With the rapid growth in women-owned small businesses over the past decade, lenders may have accumulated more experience with women borrowers and concluded that these borrowers did not impose any additional credit risk on the institution; and, (6) Financial capital market may have become more competitive, especially for line-of-credit like financing, hence women (and men) small business owners switched from mortgages and other types of financing to line-of-credit loans because they were lower priced.

The borrowing experience for women-owned small businesses has changed. If acquiring a line-of-credit from a commercial bank decreases the operating costs of the business, then women-owned small businesses would be expected to earn higher profits in the short run. Higher short run profits will mean that the business (and society) makes additional investments in human and physical capital in the long run for both the family and the business. Thus, any movement toward equal access to the financial capital market positively affects the family, the business and society.

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Endnote

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A National Comparison of Marijuana Use Between Rural and Urban Adolescents

This study uses data from the National Household Survey on Drug Abuse (NHSDA) to determine whether marijuana use by rural and urban adolescents differs. Variables that measure personal and family characteristics, and community factors are included. Results indicate that marijuana use differs between rural and urban adolescents, and that variables from all three categories have different impacts on the probability of use for both groups. These differences have implications for the development of drug prevention programs.

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Introduction

No one any longer denies the existence of drug use by rural adolescents. However, the original debate of whether drug use exists in rural areas has been replaced by the question of how big the disparity of use is between rural and urban adolescents. Despite a preponderance of studies, there is no conclusive evidence that drug use by rural and urban adolescents differs. This study uses national data to compare marijuana use between rural and urban youth. Based on a conceptual model that identifies several categories of variables that affect drug use, including community, family, economic, and individual measures, we estimate a multivariate model to predict the probability of drug use. We then statistically test whether marijuana use differs for rural and urban youth.

Review of the Literature

The vast majority of research on illicit drug use focuses on urban adolescents (Napier, Bachtel, & Carter, 1983). Although Segal and Stewart (1996) report that substance abuse is most prevalent in the largest metropolitan areas, Napier et al. (1983), Peters, Oetting, and Edwards (1992), and Robertson (1994) found that the differences in drug use between rural and urban youth are declining. In contrast to these studies, Gill and Michaels (1991) found that those in a rural area are less likely to use drugs. Some studies have focused specifically on rural drug use. Donnermeyer (1992) concludes that the literature on rural drug use in the past decade is unevenly scattered. Furthermore, conflicts in definitions of "rural" and the small number of communities that is typically included in a study of rural drug use complicate the interpretation of results (Peters et al., 1992). Napier et al. (1983) found that age and an unstable home life were positive and significantly associated with marijuana use. In contrast to Sarvela and McClendon (1988) who found that sex is not a useful predictor of marijuana use among adolescents, Novacek, Raskin, and Hogan (1991) found that males use marijuana more often than females.

Other factors that have been found to be related to illicit drug use include stress, income, perceived risk of drug use, and health. Maton and Zimmerman (1992), Segal and Stewart (1996), and Osborn (1980) all found a relationship between stress, measured in various ways, and drug use. Delinquent behavior, such as drug use, is associated with a higher frequency of moves for urban male youth (Osborn, 1980). Gill and Michaels (1992) and Register and Williams (1992) found that increased wages are associated with marijuana use. Resnick and Burt (1996) report that "youth from poor families are at increased risk for a variety of health and behavioral consequences" (176). Grant and Dawson (1996) found that receipt of transfer income increases the probability of drug use. Finally, Resnick and Burt (1996) suggest that the neighborhood in which a youth resides effects his/her risk level for problem behavior. Bachman et al. (1988) suggests that perceived risks and disapproval of regular marijuana use may negatively impact its use among adolescents. Similar to Sarvela and McClendon (1988), a study conducted by the Partnership for a Drug-Free America indicates that the environment, specifically drug use by family and friends, is a strong factor in the decision of teens to use marijuana (Gold, 1992).

The review of the literature suggests that more research needs to be conducted, using national data and multivariate statistical methods, to determine if a difference between rural and urban adolescent drug use exists. Many of the findings of previous studies are based on local, *unrepresentative samples*, and conduct uni- and bi-variate analyses that examine the relationship of *single variables* with drug use. Research that has used multivariate methods of analysis typically has focused on a *single set of issues* that may be related to drug use. Because a variety of factors may influence drug use, they should be considered in a multivariate analysis in order to isolate their individual effects on drug use of rural versus urban adolescents. This study uses a nationally representative sample, multivariate statistical modeling, and includes a variety of factors that may affect drug use, in order to predict the probability of marijuana use by rural and urban adolescents.

Data

This study uses the 1991-92 National Household Survey on Drug Abuse (NHSDA) by the National Institute on Drug Abuse of the United States Department of Health and Human Services. The primary purpose of the NHSDA is to measure the use of illicit drugs, alcohol, and tobacco by members of the non-institutionalized U.S. population who are at least 12 years old. Frequency of use in the past year were self-reported for alcohol, marijuana, cocaine, downers, heroin, hallucinogens, stimulants, analgesics, and sedatives. The NHSDA defines an urban area as any standard metropolitan statistical area (SMSA), and thus, a rural area encompasses any area not included in a SMSA. A strength of this study is the use of a national sample, weighted to depict an accurate representation of the national population of adolescents in the U.S. These weights were adjusted through various regression-based methods to account for non-response and sampling error. The weighted data set represents 4,070,358 people in the United States; 392,924 are adolescents between the ages of 12 and 17, and the remaining 3,677,434 are 18 or older. Twenty-six percent of the adolescents live in a rural area.

Methodology

Our empirical model is based on Becker and Murphy's (1992) conceptualization of addiction as rational behavior and the findings of previous research in the area of drug use. The independent variables that appear in our estimation of drug use are grouped into three categories: personal characteristics, family characteristics, and community factors. Variables that measure the personal characteristics of the respondent include: BEHIND, IRAGE, IRSEX, STRESS1, PHYSDUM, SELFHLTH, MOVES, MINORITY, and AWAG1. BEHIND is a dummy variable that indicates if the respondent is behind his/her age cohort in school by more than two grades. IRAGE is a continuous measure of the age of the respondent, and IRSEX is a dummy variable that indicates his/her gender. STRESS1, PHYSDUM, and SELFHLTH are dummy variables; STRESS1 indicates if the respondent is experiencing personal stress; PHYSDUM measures physical problems; SELFHLTH indicates if the respondent reported his/her health to be good to excellent. MOVES is a continuous measure of the number of times that he/she has moved in the past five years, and MINORITY is also a dummy variable that indicates if the respondent is non-white. The interval measure of the total amount of yearly income received from wages is called AWAG1. Hypotheses about the effect of personal characteristics on marijuana drug use include:

HP1: Increasing age increases drug use (McIntosh, et al., 1979; Napier et al., 1983).
HP2: Males are more likely to use marijuana (Novacek et al., 1991; Peters et al., 1992).
HP3: Non-whites use drugs to a lesser extent than whites (McIntosh et al., 1979).
HP4: Adolescents who are behind their age cohort in school are more likely to use drugs.
HP5: Personal stress increases drug use (Segal & Stewart, 1996; Novacek et al., 1991).
HP6: Presence of physical problems increases drug use.

The variables that measure family characteristics include: STRESS2, HOUSHOLD, OTHER, and various household income sources. STRESS2 is a dummy variable that indicates if a former member of the household, for at least the past six months, moved into a hospital, jail, or other institution in the past year. HOUSHOLD is an interval measure of the total number of members in the household. OTHER is a dummy variable that indicates if relatives outside of the immediate family an/or friends, live in the household of the respondent. TRANDUM is also a dummy variable that indicates if the household receives transfer income (food stamps or public assistance), and TOTINC2 continuously measures the sum of the total annual family income and the non-wage income of the respondent, not including transfer payments. Hypotheses related to family factors include:

HF1: Stress at home increases drug use (Maton et al., 1992; Segal & Stewart, 1996; Osborn, 1990).
HF2: Increases in household size decreases the probability of drug use (McCarthy et al., 1990).
HF3: Increases in total annual family income decreases drug use (Resnick & Burt, 1996).
HF4: Increases in the receipt of transfer income increases drug use (Grant & Dawson, 1996).

The two community factors are both dummy variables. RISKMJ indicates if the respondent considers the use of marijuana to be a risky activity. OWNDUM indicates if at least 50% of the housing units in the area in which he/she lives are owned. Hypotheses related to community factors are:

HC1: Risk perception decreases drug use (Bachman et al., 1988; Sarvela et al., 1988).

HC2: Home ownership in the region decreases drug use (Resnick & Burt, 1996).

A major hypothesis in this study is that drug use by rural adolescents differs from that of urban adolescents. For example, we hypothesize that not only does income effect rural and urban drug use, it has a different magnitude of effect for rural versus urban adolescents. The dependent variable in this equation is "use," of which there are two different variables that define "ever misused drugs in the past year." These variables indicate whether a rural adolescent used marijuana (MJUSER) and whether an urban adolescent used marijuana (MJUSEU) during the twelve month period prior to the interview. From the sample of 100,231 rural adolescents, the number of rural marijuana users in the past year is 6,304 (6.3%), and the number of marijuana users from all 292,693 urban adolescents is 22,528 (7.7%). The mean and standard deviation of the variables for rural and urban marijuana users, as well as significant differences between the two groups, are found below in Table 1.

Table 1
Descriptive Statistics.

Variable Name	Definition	Rural Users Mean/Proportion	Urban Users Mean/Proportion	Test Statistic
AWAG1^{c}	Wage Income	72.21	101.13	-1.388
		(134.36)^{a}	(209.93)	
BEHIND^{p}	1=Behind age cohort in school	47.0%	41.0%	70.63***
IRAGE^{c}	Age	15.69	15.72	.774
		(1.31)	(1.28)	
IRSEX^{p}	1=Female	48.3%	41.7%	86.96***
STRESS1^{p}	1= Experiences personal stress	37.0%	39.0%	11.85***
MINORITY^{p}	1= Non-white	92.4%	78.7%	622.57***
MOVES^{c}	Number of moves	1.98	1.40	.019
		(4.09)	(2.29)	
PHYSDUM^{p}	1=Has physical Health Problems	25.2%	27.8%	16.65***
SELFHLTH^{p}	1= Self reports health as good	79.7%	83.5%	49.73***
HOUSHOLD^{c}	# of Household members	2.68	2.46	10.28***
		(1.58)	(1.06)	
OTHER^{p}	1= Other relatives and friends reside	28.3%	24.3%	41.77***
STRESS2^{p}	1=Member has moved to an institution	2.3%	<1%	191.88***
TOTINC2^{c}	Annual Family Income	29,568	35,085	-19.47***
		(18,460)	(24,303)	
TRANDUM^{p}	1=Receipt of transfer income	13.0%	13.0%	.503
OWNDUM^{p}	1=>50% of homes are owned	93.5%	72.3%	1248.6***
RISKMJ^{p}	1=Marijuana use is risky	80.8%	82.0%	5.385**
MJUSER^{p}	1= Marijuana user	6.3%	7.7%	28832.0***

p<.10, ** p<.05, *** p<.01; a = standard deviation; c = t-test value reported, p = chi-square value reported

Bi-variate analyses indicate that rural and urban marijuana users differ significantly in all variables except AWAG1, IRAGE, MOVES, and TRANDUM. Thus, there appear to be significant differences between urban and rural samples with regard to marijuana use. However, bi-variate analyses simply describe *whether* there is a relationship between two variables, *not* accounting for other factors. The isolated effect of each variable on marijuana use can only be ascertained using a multivariate analysis. Therefore, a logit model is used to estimate the probability of use between rural and urban adolescents.

Results

Results from the logit estimates indicate that among rural and urban adolescents, *all* the variables are significantly associated with marijuana use (See Table 2), and that the *magnitude* of the effect of each independent variable on marijuana use differs, as does the *sign* for several independent variables. Therefore, we test for differences in the significance across the overall models and for individual variables for the samples. The test statistic equals: [-2 Log Likelihood(UR) - Log Likelihood(R)], and is significant at the .000 level. We reject the null hypothesis that the use of marijuana between rural and urban youth is not different. All of the variables, with the exception of MOVES and TRANDUM, reveal significant differences between rural and urban marijuana users.

Table 2
Logit Results for Marijuana Users.

Variable Name	Definition	Rural Adolescents		Urban Adolescents	
		β	Probability	β	Probability
Personal Characteristics					
AWAGI^{c}	Wage Income	-.0006***† (9.105E)^{a}	.9994	3.89E-06† (3.008E-05)	1.0000
BEHIND^{p}	1=Behind age cohort in school	-.3535***† (.0327)	.7022	-.4292***† (.0173)	.6510
IRAGE^{c}	Age	.4499***† (.0110)	1.5681	.5102***† (.0061)	1.6656
IRSEX^{p}	1=Female	-.3330***† (.0322)	.7167	-.4730***† (.0170)	.6231
STRESS1^{p}	1=Experiences personal stress	2.2967***† (.0386)	9.9412	2.1919***† (.0200)	8.9523
MINORITY^{p}	1= Non-white	-1.0518***† (.0617)	.3493	-.2936***† (.0211)	.7456
MOVES^{c}	Number of moves	.0642*** (.0061)	1.0664	.0634*** (.0037)	1.0654
PHYSDUM^{p}	1=Has physical health problems	.1089***† (.0414)	1.1150	.6143***† (.0210)	1.8483
SELFHLTH^{p}	1= Self reports health as good	-.8064***† (.0434)	.4465	-.5527***† (.0251)	.5754
Family Characteristics					
HOUSHOLD^{c}	# of members	.2071***† (.0154)	1.2301	.0479***† (.0117)	1.0491
OTHER^{p}	1= Other relatives and friends reside	.5058***† (.0489)	1.6584	.3163***† (.0293)	1.3720
STRESS2^{p}	1=Member has moved into an institution	.3218**† (.1438)	1.3795	-.2268*† (.1198)	.7971
TOTINC2^{c}	Annual Family Income	3.59E-06***† (8.344E-07)	1.0000	-3.1E-06***† (3.747E-07)	1.0000
TRANDUM^{p}	1=Receipt of transfer income	.3718*** (.0485)	1.4504	.3921*** (.0272)	1.4801
Community Factors					
OWNDUM^{p}	1=>50% of homes are owned	.5314***† (.0693)	1.7013	-.1505***† (.0200)	.8603
RISKMJ^{p}	1=Marijuana use is risky	-2.6704***† (.0499)	.0692	-1.6234***† (.0249)	.1972
CONSTANT		-7.6203 (.2021)		-8.3584 (.1027)	

* $p<.10$, ** $p<.05$, *** $p<.01$; a = standard error; c = continuous variable, p = dummy variable; † Indicates a significant difference between samples

The coefficients presented in Table 2 cannot be interpreted as the effect of each independent variable on the probability of marijuana use. Figure 1 presents the individual effect of each variable on the probability of using marijuana for rural and urban adolescents, after transformation of the coefficients.

Results indicate that adolescents who experience personal stress are much more likely to have used marijuana (9 times more likely for urban youth and 10 times more likely for rural youth). These results confirm the findings of others (Segal & Stewart, 1996; Novacek et al., 1991). Rural females are .71 times as likely to use marijuana than males, while urban females are .63 times as likely. These results confirm previous studies that indicate that females are less likely than males to use marijuana (Novacek et al., 1991), but are contrary to the findings of Sarvela and McClendon (1988). As adolescents age by one year, rural adolescents are 1.6 times as likely and urban adolescents are 1.7 times as likely to use marijuana. These findings are similar to those of Napier et al. (1983), Novacek et al. (1991), and McIntosh et al. (1979).

Our findings also indicate that rural youth who are more than two grades behind are only .70 times and urban youth only .65 times as likely to use marijuana as adolescents who are not behind. This variable has not been included in previous studies and the findings are contrary to our expectations. Interestingly, neither wage income of the adolescent or family income has any practical effect on marijuana use by rural or urban adolescents, despite their significance in the estimated equation. This is contrary to the findings of Resnick and Burt (1996), Gill and Michaels (1992) and Register and Williams (1992), but supports findings of Peters et al. (1992). On the other hand, rural and urban youth residing in households that receive government transfer payments are about 1.5

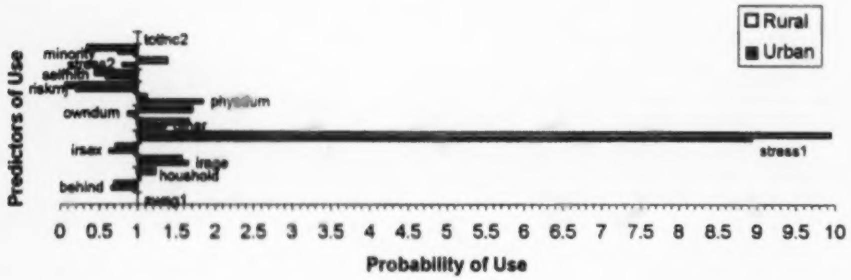

Figure 1
Differences in Marijuana Use.

times as likely to use marijuana as those who do not receive these payments. These findings confirm those of Grant and Dawson (1996). Non-white adolescents in rural areas are only .34 times as likely as whites to use marijuana, while urban non-white youth are .75 times as likely. Other research has found that non-whites use drugs to a lesser extent than whites (McIntosh et al., 1979). Rural adolescents with physical health problems are 1.1 times more likely to use marijuana than those without physical health problems, while urban youth with a physical health problem are 1.8 times more likely to use marijuana. This variable has not been included in other studies of this type. For each additional individual in a household, rural youth are 1.2 times more likely to use marijuana, and urban youth are just as likely to use marijuana in any size household. This result contradicts the findings of Webb and Collette (1975). However, if relatives other than parents or friends reside in the household, rural youth are 1.7 times more likely and urban youth are 1.3 times more likely to use marijuana.

The effect of stress in the household (STRESS2) and residing in a region of higher home ownership (OWNDUM) actually affect marijuana use of rural and urban adolescents in opposite directions. Rural adolescents who experience household stress are 1.4 times more likely and urban adolescents .8 times as likely to use marijuana than adolescents who do not experience household stress. These results for urban youth contrast the findings of others, while the results for rural youth confirm the findings of others (Maton and Zimmerman, 1992; Segal and Stewart, 1996; Osborn, 1980). Rural adolescents who reside in a region in which over half the homes are owned are 1.7 times more likely and urban adolescents are .9 times as likely to use marijuana than adolescents who reside in regions in which over half the homes are rented.

Discussion

Our multivariate analysis using a nationally representative data set suggests that there *is* a difference in the use of marijuana by rural and urban youth, and it quantifies the effect of several variables on the probability of drug use. Rural and urban adolescents represent two populations that vary in their probability of drug use with regard to personal and family characteristics, and community factors. The effects of experiencing personal stress has, by far, the greatest impact on *increasing* the probability of marijuana use. Perceptions of risk, have, by far, the greatest impact on *decreasing* the probability of marijuana use. Transfer payments, household size, age of the adolescent, and presence of physical ailments all increase the probability of marijuana use for both populations. These variables appear to be most useful in order to target youth in a program for both rural and urban youth that aims to deter drug use. On the other hand, the effect of household stress and regions of higher home ownership on marijuana use showed opposite effects for rural and urban youth, and cannot be used as predictor variables across the board as indicators of drug use. Clearly, for consumer education purposes, rural and urban use differs, and is impacted differentially by several categories of predictors. Any campaign that aims to decrease use of drugs must take into account the area in which the youth resides before the education process can begin.

The results of this paper are particularly useful in designing and evaluating national drug education programs that do not differentiate between rural and urban areas. A national program has an increased chance of being effective if it considers these variables that are common predictors of marijuana use among both rural and urban youth. This paper is also helpful to less urban communities that may model a drug program after one implemented in a metropolitan area. Such an adaptation may be ineffective due to the differences in factors that affect the probability of marijuana use among rural and urban youth.

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Endnotes

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Consumer Educators, Now Is The Time For A Paradigm Shift Toward Employee Financial Education

In order to better reach all people, there must be a paradigm shift for consumer educators toward employee education. Workers with money problems cost their employers big money, and those money problems occur because of personal difficulties with credit, budgeting, and consumer rip-offs. Consumer educators are qualified to teach such concepts in the workplace, and this will in turn help more workers overcome financial obstacles to fully fund their retirement plans. Virginia Tech's Personal Finance Employee Education outreach effort (www.chre.vt.edu/~/pfee/) can help educators partner with employers.

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Times have changed for consumer educators, and so has the audience. Budget cuts and downsizing at universities in recent years has reduced the number of academic programs. Fewer states and school districts are mandating consumer education in the public schools. The lives of consumers, especially for families, have become busier than ever, leaving them precious little time for important matters, such as leisure time with children and spouse, as well as participation in community education programs. Today's time-pressured lifestyles often leave consumers largely unable to pay attention to public service announcements about the latest product recall or to read the Consumer Information Center's newest publication on whether it is better to buy or lease a car. Thus, it is not surprising to find that, "only about a quarter of adults feel confident in their ability to choose a mutual fund that suits their needs (Atchley, 1998)."

It is not, however, time for consumer educators to give up! With today's marketing efforts targeting younger consumers, such as primary and secondary school pupils, students need consumer education more than ever. They need good decision making skills. They need to learn how to resist the sales pressure of the media. They need to learn how to establish spending and credit use priorities. They need to plan for and take action to secure their financial futures. All young consumers need to learn how to make such informed decisions. No, that's not correct. All people need to know how to make these informed decisions.

Employers Today are Offering Employees Financial Education

In order to better reach all people, there must be a paradigm shift for consumer educators toward employee education. Over 130 million consumers are in the paid labor force, and most work for employers who are now genuinely interested in helping workers make good consumption decisions, although this was not true a decade ago.

To be specific, employers are offering "financial education" to their employees. This usually means educating workers about saving for retirement. Fifty-six percent of employers "are offering employees financial education on saving and investing for retirement" (KPMG..., 1997). This has occurred primarily because of recent changes in retirement plans in American society. The shift by most employers from offering employees a defined-benefit pension plan to providing a defined contribution plan, such as a 401(k) and 403(b) pensions, is a nationwide phenomena.

In a survey of more that 1,000 employee benefits specialists nationwide, three-quarters "said developing and providing investment education is their number one concern moving into 1998 (Investment education, 1998)." One expert says that this represents a "sea change in attitudes to benefits" from managed care to investment education.

Why Employers are Offering Financial Education

There is a rapidly growing national movement to offer financial education in the workplace (Lee, 1997). This is occurring primarily because so many workers are not saving for retirement that they are going to have extreme difficulty finding the money for retirement (Swoboda, 1997). Workplace financial education increases participation in retirement plans (Bernheim & Garrett, 1996; Lee, 1997).

However, employers have long been hesitant to offer employees anything beyond a minimal amount of information about their retirement plans and investment options. This reticence was based upon the lack of legal protection from employee lawsuits claiming that the employer gave them faulty advice, unsatisfactory investment choices, and/or injurious financial education.

While employers remain "legally constrained from offering investment advice [underscore added]," the law covering retirement plans now "requires firms to give workers educational material on the basics of investing" (Egan, 1997). The 1996 Department of Labor Final Interpretative Bulletin regulations have "created a safe harbor for virtually all the commonly used forms of participant education" (Berg, 1997). In essence, employers today must offer financial education to employees. A concurrent motivation has been the growing recognition that employees who experience difficulties with their personal finances bring those personal problems into the workplace, causing negative costs for the employer.

Employees are Not Saving for Retirement

According to a study by Access Research, average participation rates for 401(k) plans are about 78 percent, compared to 30 to 35 percent for 403(b) plans (Harrison, 1997). "While three out of four workers in firms with over 1,000 employees participate in a pension plan, only one in four workers in firms with fewer than 100 employees participate in a pension plan" (Berg, 1997). Fully half the people who do retire do so with no pension plan (Berg, 1997).

According to the Public Agenda/Fidelity study titled Miles to Go: A Status Report on Americans' Plans for Retirement, "three in 10 of the Americans closest to retirement say they have personally saved less than $10,000 for the years they are no longer working" (30% of Americans..., 1997). A Consumer Federation of America/NationsBank study on financial planning finds that Americans are "ignoring important goals" such as retirement (Bailey, 1997). The Workforce 2020 report of the Hudson Institute concludes that increasing numbers of workers will be "forced to stay on the job because they cannot afford to retire" (Swoboda, 1997).

Employees with Personal Financial Problems Cannot Save for Retirement and they Cost their Employers Big Money

Research shows that "approximately 15 percent of workers in the United States are currently experiencing stress from poor financial behaviors to the extent that it negatively impacts their productivity" (Garman, Leech & Grable, 1996; Garman & Leech, 1996; Gentile, 1997).[2] One employer recently was quoted saying that, "40 to 50 percent of my employees are over-stressed about their debts such that it reduces their productivity, and that is a very conservative estimate" (Garman, 1997). Depending upon employee income level, age, stage in the life cycle, and the cost of living, the proportion of workers experiencing financial problems that negatively impact productivity for a single employer could range as high as 40 to 50 percent. This is not an unrealistic number.

A research study by the Military Family Institute (MFI) concludes that the indirect costs of poor personal financial behaviors of U.S. Navy service members is conservatively estimated to be between "208 and $294 million annually in overall productivity costs" (Luther, 1997; Luther, et al., 1997; Associated Press, 1998a; Associated Press, 1998b). "Most sailor's problems stem from poor financial planning and management rather than too little money (Peniston, 1997)." While "financial mismanagement is very widespread in the lower enlisted ranks, many senior enlisted members and officers are also experiencing financial problems (Luther, 1998)." The annual cost of financial illiteracy for the entire Department of Defense may be $1 billion (Service members'..., 1998; Kristof, 1998)." To reduce these high costs to the military, the government is considering requiring annual training in personal finance (Tennant, 1997)."

The nation's elder statesman on financial counseling for employees is the R. J. Reynolds Company's recently retired pastoral counselor Rodney Brown. He says that, "No company is immune to the effects of financial entanglements no matter how good the pay and benefits (Brown, R. C., personal communication to E. Thomas Garman, July 17, 1997)." Brown (1993) very conservatively deduced that "employees with financial problems cost their employer no less than 10% of their salaries per year in lost productivity...The waste factor could be 15-20%!" Money problems of workers not only cost their employers but they also are an obstacle "for workers wanting to contribute to their employer-sponsored retirement plan (Garman, 1998)."

This is a Golden Opportunity to Teach 130 Million Employees Consumer Education

Consumer educators should realize that such financial education for employees offers them a golden opportunity to provide consumer education to an audience that has been largely ignored by educators million people called workers. Consumer educators are quite capable of providing information and education for employees to help them save for retirement and make informed decisions about investment risks. Consumer educators also should realize that such a captive audience provides the perfect opportunity to offer employees more than just retirement education.

They can teach many critically important aspects of consumer education, such as helping employees make satisfactory choice on health benefits, life insurance, long-term disability, and dependent care. Consumer educators can teach workers how to make personal assessments about money management and how to use consumer credit. They can teach employees how to use consumer protection laws and regulations.

This is consumer education! Who cares what the real world calls consumer education—financial education, retirement education, personal finance education—because it does not matter as long as people are educated on making informed consumer decisions.

Today's Personal Finance Employee Education

Participation rates in defined contribution pension plans, such as 401(k) and 403(b) plans, are not as high as they ought to be. The two key reasons are (1) money problems are the number one obstacle for workers wanting to contribute to their employer-sponsored retirement plan, and (2) many workers are uninformed about both the existence of the need and the motivation to save for their own retirement. It is estimated that one-half of workers with personal financial problems also are likely to be performing poorly on the job, and this negatively impacts their employers.

Tomorrow's Personal Finance Employee Education

To remain competitive in the labor market, leading edge employers are offering a more comprehensive personal finance employee education program, rather than narrowly focused retirement education, to attract and retain the best employees. For many employers, this represents a paradigm shift, and that is exactly what is needed to effectively reach all workers.

This broader vision of financial education for employees is at the heart of the efforts of the Personal Finance Employee Education (PFEE) outreach effort sponsored by Virginia Tech's Center for Organizational and Technological Advancement. The PFEE project staff believes that personal finance employee education should be made available to all workers in the United States. It defines personal finance employee education as information, education, and services provided by an employer to help its employees make informed decisions about employer-sponsored retirement plans, other employer furnished fringe benefits, credit and money management, and consumer protection rights.

How Educators can Teach Consumer Education Concepts as Part of Financial Education for Employees

The time has never been better for employers to offer comprehensive personal finance employee education programs. Experts are calling for "developing a cadre of personal finance educators...to provide effective and unbiased training to enable adults to create their own financial self-sufficiency over the lifespan (Atchley, 1998)." Employers have heard the wake-up call. Employers want to take proactive measures to guide employees toward organizations and agencies that can provide them with financial help, such as credit unions, non-profit credit and budget counseling services, and reputable providers of information, education, and services.

Consumer educators are ideally situated to assist employers in their communities. They bring a research-based, broad perspective to the subject. They are grounded in family theory and economics. They are competent in all areas considered vital to comprehensive personal finance employee education.

Consumer Educators Can Facilitate Offering Employees Information, Education, and Counseling Services

Workers today live in a financial world of great complexity and challenge, a world far different than a generation ago. "In the past, most workers could rely on the financial knowledge that was built into employee benefits, especially defined benefit pension programs, and retiree health insurance. Today we are moving away from institutional forms of income security toward a more individualistic approach. But we are not providing the public with the knowledge and skills needed to cope with this new model of income security in later life (Atchley, 1998)." Employers with the help of consumer educators need to help workers make good decisions about pension plans, cafeteria plan benefits, credit and money management, and consumer rights. Consumer educators themselves need not personally offer every type of conceivable service to employers. Rather they can coordinate the convergence of area employers with various types of personal financial employee education experts.

Consumer Educators Can Offer Their Research Expertise

Consumer educators must conduct research in order to convince employers of the value of any personal finance education they might provide in the workplace. Action research is an inquiry or investigation into a problem with the expectation that the findings, not definitive answers, might provide some insights to its resolution. Action research is often conducted with questionnaires that contain only a few questions and variables. Consumer educators must conduct action research in their communities, share research instruments with others, and publicize findings with employers and with others.

What Types of Research Should Consumer Educators Conduct?

Evidence on the bottom-line benefits of personal finance employee education needs to be accumulated in one or more of six areas: (1) increasing employee motivation, self-confidence and job productivity, (2) decreasing absenteeism due to matters associated with personal finances, (3) decreasing healthier costs, particularly for stress-related illnesses, (4) saving work time from not attending to personal finances during the workday, (5) securing employee loyalty and retention, and (6) avoiding lawsuits from employees claiming employer negligence.[4]

Employers and consumer educators can work together to place values on these factors. The best way to obtain the information is to bring the key people together employers along with providers of information, education and services that they can agree on data analysis as well as the solutions.

After offering work site educational programs, such as seminars, workshops, and classroom instruction, as well as face-to-face interactions, it is vital to measure the results and share the findings with employers. Calculating the numbers should reveal that the personal financial wellness of employees is something that can be turned from a cost into an asset for employees, employers and shareholders.

Proponents of comprehensive personal finance employee education, must be able to make a dollar-based economic impact statement such as, "This calculation shows that a PFEE program valued at X dollars will save the company Y dollars per year." The return-on-investment calculation will do no good, however, unless the information is publicized.

What Should Be In A Comprehensive Personal Finance Employee Education Program?

The number one goal of employers should be to provide personal finance education that will change employee behaviors and motivate 100 percent of them to participate in retirement plans. The second goal of employers should be to identify employees experiencing stress from personal financial management difficulties and provide them with assistance. These workers, and possibly members of their families, need information, education and perhaps counseling to help them make better financial decisions.

How Can the Personal Finance Employee Education Outreach Effort Help?

How can consumer educators find out more about how to help employers in their geographic area educate their employees? The Personal Finance Employee Education outreach effort is a Commonwealth of Virginia outreach effort to exhibit model financial education programs, conduct research, and host national conferences to share knowledge about best practices and collaborations.

The purposes of the conference are twofold: (1) to bring together employers and providers of information, education and services on personal finances together in a luxurious setting and comfortable networking format, and (2) to feature the latest research, position papers and model employer programs in PFEE.

Join us in Roanoke, Virginia to help build the body of research and the numbers of examples of successful model programs. Please come to these conferences, share your research and collaborations with employers, and tell others about your action research findings.

The next national conferences will be held June 9 - 10 and November 10 - 11, 1998, in Roanoke, Virginia (for details see www.chre.vt.edu/~/pfee/). As with last year's meeting, published conference proceedings are available for sale.

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Endnotes

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2. Examples of costs to employers caused by the stresses associated with the poor personal financial behaviors of employees include taking time away from productive labor to confer on the telephone with creditors, seeking sources of additional credit, conversing with co-workers about stresses, talking with supervisors about financial problems, placing gambling wagers, calling in sick to their employers so they can make court appearances, talking with attorneys, meeting with others concerning their personal financial problems, and taking occasional extended work breaks, supposedly to use restroom facilities or to eat a meal, but instead spend the time dealing with financial stress.
3. The problem of excessive household debt is serious, even though the nation is experiencing the best economic times in 40 years. "Two-thirds of Americans say they have trouble paying their bills and worry about money" (Coping with money woes, 1996). A national survey reveals that 3 out of 4 Americans faced at least one significant financial problem recently, such as being unable to save for future needs, delaying medical care, or having problems with a collection agency. Personal bankruptcies last year rose to "1,242,700 filings, up 35%" over the previous year (Criticism..., 1997). Projections are for further increases (McDonnell, 1997).
4. Jill Landauer in the July 1997 issue of HRFOCUS (pp. 3-4) describes the first five broad areas, using similar but different terminology, as useful to demonstrating the benefits of work/life programs for employees.

Consumer Interests Annual *Volume 44, 1998*

Gye (financial club) Participation among Koreans

This study establishes a profile of Gye participants and identifies who is more likely to participate in Gye, using the 1993 Korean Household Panel Study. Financial and demographic characteristics of participants differ from that of non-participants. The results of probit analysis show that earned and unearned income, liquid assets, expectation for their future financial status, residence, marital status, age, and the length of residency in current housing are significant factors in explaining Gye participation.

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Introduction

Gye, often called a "financial club," was originated thousands years ago when Korea was a kingdom. The primary purpose of Gye was to maintain and improve community welfare through cooperation and mutual assistance. Gye played an important role as a co-op in a self-sufficient agricultural society where financial institutions did not exist. It was started in rural areas to establish a common fund for social gathering, ancestral worship, or emergency. The significance of Gye has historically diminished as societal changes occurred such as the development of the financial market, increased mobility, and the establishment of a social welfare system.

Gye is a voluntary association based on ties of family, region, employment or school. It operates based on mutual trusts among associates. The main function of Gye is the pooling of financial resources from each associate to establish a fund so it can be available for one of the associates who is assigned in advance. The time at which the fund is received by each member is usually determined by the associates with a consensus. It is common that the associates have a regular meeting, usually monthly, and a financial transaction based on the pre-planned schedule proceeds an informal social gathering. (Kim, 1987; Kim, 1991a).

The purposes of participating in Gye have been altered. According to the studies that have examined the purposes of Gye participation, establishing a commonweal for marriage or funeral funds was the main purpose of participation in earlier years. Since the 1980s, Gye has been a popular tool to establish funds for traveling, children's education, purchasing household appliances, and leisure activities (Eikemeier, 1980; Choi, 1987; Kim, 1987; Kim, 1991b; Kim, 1992).

The level of Gye participation has also been changed as the society changes. In 1965, about 21% of rural households participated in Gye (Do, 1965). The participation rate was much higher in 1986; 47% for rural households and 41% for urban households (Chung, 1986). However, a report by the Bank of Korea (1989) indicated that only 25.7% of urban households participated in Gye. On average, urban households were involved in two Gyes while rural households participated in one Gye (Kim, 1991b). The inconsistent patterns of Gye participation rates may be the result of the data used in each study.

The existing research on Gye focused on the major functions and purposes of Gye. For example, economists studied the role of Gye as a substitute for personal financial management and sociologists examined the characteristics of Gye as a cooperation, and how Gye was managed as an organization (Park, 1988; Kim, 1988). A few studies focused on the purposes of Gye (Wang, 1983; Choi, 1987; Kim, 1987). Despite the important function of Gye in family finance, limited attention has been given to Gye by consumer and family economists. Furthermore, the existing research used local data with small samples, limiting generalizability of the results. This study will utilize a national data (1993 Korean Households Panel Study) and it has three objectives: (1) to examine the characteristics of those who participated in Gye; (2) to compare the financial status of the Gye participants with the non-participants; and (3) to identify the influencing factors in Gye participation.

Previous Studies

Purposes for Gye Participation

Wang (1983) identified five purposes of participation in Gye: establishing a fund to loan to others, being involved in a cooperative business, for social gathering, saving for education and wedding funds. Kim (1988) classified Gye into two types: social and economic. Social Gye focuses on the social interaction among associates and economic Gye concentrates on the capital accumulation such as savings, emergency funds, and commonweal funds for marriages, children's education, and funerals.

According to the Bank of Korea (1989), 32% of those involved with Gye participated in it for social gathering, 21.4% for housing funds, 19.5% for children's education, 8.6% for business start-up funds, 5.8% for marriage and funeral funds, 4.8% for purchasing large expense items, and 7.9% for other reasons. Kim (1991b) studied the patterns of Gye participation among homemakers residing in Seoul (n=366). Three major reasons were identified: 35.5% for social intimacy, and marriage or funeral funds, 33.3% for the preparation of a lump sum of money, and 30.6% for purchasing durable goods or jewelry. Kim (1992) also studied the purpose of Gye participation among 1,519 rural households and reported the following reasons: 37.7% for social gathering, 30.7% for children's marriages, 12.8% for traveling and leisure funds, 9.3% for the preparation of a lump sum of money, and 9.5% for other reasons.

Contributing Factors to Gye Participation

Researchers were interested in examining the role of household financial characteristics on Gye participation because of the significant function of Gye in family finance (Kim, 1988; Kim 1991b, 1992). Family income was found to be an important factor explaining the participation in Gye. As family income increased the number of Gye that individuals involved with also increased. The level of liquid and non-liquid asset holdings had a positive effect on Gye participation: the higher the liquid and non-liquid assets the higher the probability of Gye participation. The ownership of a farm or land had a positive influence on Gye participation while home ownership had no significant effect.

Because of the requirement for regular contributions to the Gye fund, usually monthly, it is commonly expected that the salaried are more likely to involve themselves in Gye than those who are on wage incomes or other types of irregular income. Kim (1991b), however, found no significant relationship between receiving a regular income and Gye participation.

Chung (1986) found that those who lived in rural areas were more likely to participate in Gye than those who lived in urban areas. Their major purposes were social gathering and establishing children's wedding funds. Urbanity was also found to be related to the participation rate of Gye in Cheju Island (Kim, 1988); rural residents were more likely to participate in Gye than urban residents. The length of residence affected the likelihood of participation in Gye. The length of residency was positively associated with Gye participation for urban homemakers while it had a negative effect on the Gye participation of rural homemakers (Kim, 1992). Age is also an important factor (Kim, 1991b): one is more likely to participate in Gye as he/she ages. Education had no significant effect on Gye participation (Kim, 1991b). The self-employed tended to be more involved in Gye than others (Kim, 1992).

Methods

Data and Sample

The data used in this study are from the 1993 Korean Household Panel Study (KHPS). It is a panel of data collected every other year by the Daewoo Economic Research Institute. The 1993 KHPS contains information on detailed expenditures of various categories, comprehensive financial information, and socio-demographic characteristics of 4,547 households (Daewoo Economic Research Institute, 1993). The sample in this study consists of the primary respondent in each sample household (n=4,081). Households with no response to Gye participation question were excluded (n=466).

Variables and Hypothesis

The dependent variable is a dichotomous variable: 1 if participated in Gye, 0 if not. The independent variables were selected based on the previous research and categorized into three groups: financial, social, and demographic. Financial factors include earned income, unearned income, liquid assets, home equity, and the perceived financial status by the respondent for their current and future financial situation. It is expected that the likelihood of participation in Gye decreases as the level of financial assets increases if the purpose is to establish a fund for occasions that requires large expenses. A higher level of financial resources may lead to a higher level of participation in Gye if the respondent seeks only a social function of Gye. Therefore, the effect of the level of financial resources on Gye participation is not clear. It is also unclear how the respondent's perceived financial status influences the likelihood of Gye participation. No previous studies examined this variable. The value of all financial variables were converted to U.S. dollars (900won = approximately one U.S. dollar).

Social factors are city size reflecting the level of urbanization and the length of residence. Kim (1988) and Kim (1992) found that rural residents are more likely to participate in Gye than urban residents. A lower participation, thus, is expected for those who reside in a large city. The length of residency has not been examined in previous research. In this study, we expect that the likelihood of Gye participation increases as the period of residency in their current housing increases, with an assumption that establishing a trustworthy relationship requires time.

Demographic variables are gender, marital status, life cycle stage, education, occupation, self-employment, and family type. The role of gender in Gye participation has not been examined in previous research although literature indicated that women may participate more in Gye than men (Choi, 1987; Kim, 1992). No previous studies examined the effect of marital status on Gye participation and the effect is, therefore, not clear. In this study, we assume the married may be more likely to involve themselves in Gye than the non-married because the major reasons identified for Gye participation tend to be related to married life (e.g., children's education and marriage). Older individuals are more likely to participate in Gye than the young (Kim, 1991).

Education had no significant effect in the previous research. In this study, it is expected that education may decrease the likelihood of Gye participation since educated individuals tend to be aware of the financial risk involved in Gye, and alternative saving and investment options. Whether the respondent is salaried or not captures the constant cash flow of income. Since Gye usually requires a regular monthly payment, it is expected that the salaried are more likely to participate in Gye than others. The effect of being self-employed is not clear. Since the self-employed tend to have irregular incomes as compared to the salaried, they may not join a Gye as often as when compared to others. However, Gye can provide them with an opportunity to establish a lump sum of money for their business. Living in an extended family may affect the Gye participation of the respondents. It is common in Korea that the adult child who lives with his/her parents is responsible for family affairs (e.g., special birthdays at 61st or 70th , silver or golden anniversary of parents' wedding) that require large expenses and thus, are likely to join Gye.

Analysis

Means and frequencies were computed for the three groups; the total sample and the dichotomized sample by Gye participation status. T-tests and chi-squared tests were performed to examine whether significant differences exist between the characteristics of the participants and non-participants. To estimate the participation model, probit analysis was performed since the dependent variable, Gye participation, is binary. The estimated coefficients are the changes in the odds ratio, the ratio between the odds of one event occurring versus the other event occurring. The coefficients are the indication of the direction not the magnitude of the relationship (Greene, 1993). Since the probit estimates are not directly interpretable, marginal effects of explanatory variables were computed at the sample means and modes for parameter estimates that were identified statistically significant.

Results

Sample Characteristics

The characteristics of the sample are presented by the Gye participation status in Table 1. Those who participated in Gye were better educated and had a higher earned income than those who did not participate in Gye, on the average. The earned income and home equity of the participants was $24,255 and $68,602, respectively while the numbers were $18,935 and $57,211 for the non-participants. The perceived current and future financial status was better for those who participated in Gye than for those who did not.

Among the participants in Gye, 21.7% were self-employed while the number was 14.8% for non-participants. More individuals who were under 35 participated (52.1%) in Gye than the middle (41.7%) and old age groups (6.2%). About two-thirds of Gye participants resided in a large city whereas about half of non-participants did. About half of the participants had lived in their current housing less than three years while the number was about 40% for non-participants. About half of the participants owned their home, while almost 57% owned one among non-participants.

Table 1
Descriptive Statistics by Gye Participation Status

Variables	**Total (n=4,081)**	**Participated (n=743)**	**Not-participated (n=3,338)**
Continuous variables:			
Earn income ($) ***	19,903 (13,890)	24,255 (13,690)	18,935 (13,750)
Unearned income ($)	8,627 (12,365)	10,753 (13,492)	7,649 (11,722)
Liquid assets	10,010 (13,534)	10,570 (14,607)	9,861 (13,232)
Home equity***	59,322 (76,921)	68,602 (89,183)	57,211 (73,701)
Perceived current financial status *	2.64 (.85)	2.71 (.80)	2.63 (.86)
Expected financial condition ***	3.03 (.74)	3.11 (.76)	3.01 (.73)
Education ***	10.60 (3.70)[a]	11.47 (2.93)	10.41 (3.82)
Categorical variables:			
City size ***			
Large city	2,195 (53.8)[b]	495 (66.6)	1,700 (50.9)
Otherwise	1,886 (46.2)	248 (33.4)	1,638 (49.1)
Residence period ***			
less than 1 yr.	815 (20.0)	156 (21.0)	659 (19.7)
1-2 yr.	940 (23.0)	215 (28.9)	725 (21.7)
3-5 yr.	786 (19.3)	156 (21.0)	630 (18.9)
6+ yr.	1,540 (37.7)	216 (29.1)	1,324 (39.7)
Gender			
Male	2,037 (49.9)	375 (50.5)	1,662 (49.8)
Female	2,044 (50.1)	368 (49.5)	1,676 (50.2)
Salaried	1,169 (28.6)	218 (29.3)	951 (28.5)
Self-employed ***	655 (16.0)	161 (21.7)	494 (14.8)
Marital status *			
Married	3,523 (86.3)	659 (88.7)	2,864 (85.8)
Not-married	558 (13.7)	84 (11.3)	474 (14.2)
Life cycle ***			
Under 35	1,889 (46.3)	387 (52.1)	1,502 (45.0)
35-54	1,605 (39.3)	310 (41.7)	1,295 (38.8)
Over 55	587 (14.4)	46 (6.2)	541 (16.2)
Home ownership ***			
Owned	2,264 (55.5)	372 (50.1)	1,892 (56.7)
Not-owned	1,817 (44.5)	371 (49.9)	1,446 (43.3)
Family type			
Nuclear family	3,645 (89.3)	669 (90.0)	2,976 (89.2)
Extended family	436 (10.7)	74 (10.0)	362 (10.8)

Note : [ab]Numbers are in parenthesis represent standard deviation and percentage, respectively.
$p < .05$ ** $p < .01$ *** $p < .001$

Distribution of selected financial status

The median values of the selected financial variables were computed to compare the financial portfolio of those who participated in Gye with those who did not. The median value of Gye was $4,000. A typical household of the participated had an annual total income of $26,887, while that of the not-participated was $18,125. The participants also had a higher asset, debt, and net worth than the non-participants. The median dollar values of savings and stocks held by the non-participants were higher than those of the participants, whereas the median dollar values of bonds and transfer income were almost the same.

The Factors Associated with the Probability of Participating in Gye

Table 2 presents the results of the probit analysis. Those who have higher earned and unearned incomes are more likely to participate in Gye than those with lower earned and unearned incomes. An increase in liquid assets decreases the likelihood of Gye participation. Those who perceive their future household's financial condition would be improved, are more likely to participate in Gye than those who do not. However, how they perceive their present household's financial status and home equity do not influence the probability of participating in Gye.

Living in a large city affects the probability of participating in Gye positively. This result suggests that those who live in a city with a population of over 500,000 are more likely to participate in Gye than those who live in other areas. Compared to having less than a one year period of residency, one to two years of residency affects the likelihood of participating in Gye positively. There is no difference between the residency of over three years and less than one year of residency, indicating individuals tend to participate in Gye during the first or second year of residency.

Table 2.
The Estimated Probit Results of Gye Participation (n=4,081)

Variables	Parameter Estimates	Standard Errors
Financial factors:		
Earned income ($100,000)	9.957 **	2.922
Unearned income ($100,000)	9.094 **	3.034
Liquid asset ($100,000)	-5.833 *	2.598
Home equity ($ 100,000)	5.165	4.965
Perceived present financial status	-0.043	0.049
Expected financial condition	0.110 *	0.050
Social factors:		
City size (1 if large city)	0.311 ***	0.079
Residence period (less than 1 year)		
1-2 year	0.272 *	0.109
3-5 year	0.127	0.119
6+ year	0.099	0.119
Demographic factors:		
Gender (1 if male)	-0.038	0.100
Marital Status (1 if married)	0.429 **	0.131
Life cycle (under 35)		
35-54	-0.159	0.093
55 and over	-0.440 *	0.179
Education	0.010	0.016
Occupation		
Salaried (1 if yes)	-0.044	0.108
Self-employed (1 if yes)	-0.211	0.124
Family type (1 if nuclear family)	-0.120	0.126
Constant	0.898 *	
Log likelihood ratio	-739.166	
Chi-squared	1478.332 ***	

Note: *$p < .05$ ** $p < .01$ *** $p < .001$

As expected, the married are more likely to participate in Gye than the non-married. Compared to those under 35, those who are older than 55 are less likely to participate in Gye, while there is no difference between those under 35 and the middle aged. Gender, education, occupation, and the family type have no significant effect on the probability of participating in Gye.

Summary and Conclusion

Using the 1993 KHPS, this study established a profile of Gye participants and examined the factors associated with the probability of Gye participation. Approximately 20% of the respondents participated in Gye. As compared to the non-participants, the participants are better educated, have higher earned income, higher home equity, and have a better perceived financial status for their current and future financial standing. More participants are married, self-employed, young, live in a large city, have lived in their current housing for less than three years, and are non-homeowners than non-participants.

The results of probit analysis suggest that those who have higher earned and unearned incomes, those who have positive financial expectations for future, reside in a large city with more than 500,000 people, have lived in their current housing for one to two years, and are currently married, tend to participate in Gye. Those who are older than 55 are less likely to participate in Gye than those under 35. Having higher liquid assets decrease the likelihood of Gye participation.

A positive association between higher earned and unearned incomes and Gye participation, and a negative effect of liquid assets on Gye participation are worth noting. These findings indicate that Gye is a useful tool for only those with higher earned and unearned incomes but not for those with higher liquid assets. Since one of the reasons why individuals join Gye is to establish a large fund, those with higher liquid assets may not have any incentive to join Gye. Gye is risky since there is no protection against financial losses when it is dissolved. Using Gye as a saving or investment tool is, therefore, dangerous and could result in a financial catastrophe. Financial education for asset management and diversified investment should be readily available for those who are interested in Gye.

The results of this study have implications for financial educators as well as financial counselors and planners assisting in the financial planning of individuals and households. For instance, money management and budgeting skills can be taught to those who are interested in Gye so they can seek other financial tools for their saving and investment. Almost 20% of the households in this study are involved in Gye, indicating they could be a target population for introducing new financial products that could provide benefits as Gye does, such as the flexible timing of receiving funds and no tax liability on the funds.

Since Gye is a social tradition in Korea, it is unlikely to end. The proportion of individuals who are involved in Gye may decrease as the financial market develops and more financial products are available. The economic significance of Gye may diminish but Gye will continue to serve its social function. The lack of information about the purposes of participating in Gye in the data limits any further interpretation of this study. Examining the purposes of Gye participation by individual characteristics and the amounts invested in each Gye will enhance our understanding of it immensely.

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Risky Asset Holders in Korea: A Study of Institutional and Non institutional Risky Assets

This study identified factors associated with the likelihood of owning institutional and non institutional risky asset in Korea. The results of probit analysis indicated that marital status, education, occupation, unearned income, housing tenure, and riskless financial asset were related to the likelihood of institutional risky asset holding, while residence, occupation, unearned income, housing tenure, and debt status were related to that of non institutional risky asset holding.

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Introduction

Due to the fast growing financial market and the popularity and public acceptance of non institutional investment, in Korea, saving and dissaving occur through financial institutions and other informal financing channels such as Gye and Sachae. Gye, often called "financial clubs",is an informal organization that pools financial resources from each associate to create large blocks of funds for investment (Choi, 1986; Kim, 1988). The Sachae is a personal loan source which investors who want high yields give to persons who do not qualify for conventional loans. Individuals who cannot acquire loans through conventional sources at lower interest rates, are willing to accept the Sachae's higher rates.

The total financial assets of urban Korean households averaged $11,264 in 1992 (Kookmin Bank, 1993). They invested 86.9% of total financial assets in financial institution, and 13.1% of that in non institutional organization. Even though Gye and Sachae lenders assume the risk of uncertainty that the interest and principal may not be repaid, these loans continue to claim a sizable portion of personal finance in Korea.

Nowadays, various investment products with different levels of risk and return are available in Korea. But consumer information on personal finance, including investment, has not been readily available for individual investors. Investment decisions have been influenced largely by friends' or family members' opinions rather than by investment consultants or financial planners. Consequently, financial losses and family disruptions have occurred in recent years.

Investment behavior in Korea, especially risky asset holding, has scarcely been studied. And most studies which focused on saving behavior of Korean consumers have used local data with small sample size. This study attempts: (1) to describe the financial asset portfolio composition of Korean households, and (2) to identify factors associated with holdings of institutional and non institutional risky assets, using the 1994 Korean Household Panel Study (KHPS). Accomplishing these objectives will generate useful information for development of educational programs for personal finance, especially investment decisions.

Related Literature

Factors Related Risky Asset Holdings

Previous research documents that age is positively related to the risky-asset fraction of the portfolio (Cohn, et al., 1975; Weagley & Gannon, 1991) but is negatively related to the willingness to take risk (MacCrimmon & Wehrung, 1990; Roszkowski, 1993). Financial decision making differs by marital status (Haynes & Helms, 1990). Single individuals are more risk-tolerant and generally invest a larger proportion of their portfolio in risky assets than do married individuals (Cohn, et al., 1975; Roszkowski, 1993). A previous study indicates that households in which a member is employed are more likely to hold assets in tax-favored retirement investments, or less likely to hold assets in traditional savings vehicles (Weagley & Gannon, 1991). Education is related to both bond and stock holdings positively (Zhong & Xiao, 1995). Households with higher investments in stocks are more likely to be headed by professionals who are less risk-averse (Ramaswami, Srivastava & McInish, 1992).

It is widely accepted that investors, to a substantial degree, base their decisions on expectations of future earnings (Baker & Haslem, 1973). The perception of future financial situation is related to stock holdings (Kreinin, 1959) and bond holdings (Zhong & Xiao, 1995).

Higher income increases the likelihood of holding risky assets, or risk taking (Cohn, et al., 1975; Haynes & Helm, 1990; MacCrimmon & Wehrung, 1990; Ramaswami, et al., 1992). Most studies indicate the relationship between wealth and risky asset holding as positively significant (Cohn et al., 1975; MacCrimmon & Wehrung, 1990; Ramaswami, 1992). And in the pyramid model, it is a management premise that investors should not progress to successive levels of the pyramid until they build a solid foundation of safer financial assets at preceding levels (Weagley & Gannon, 1991). Home ownership is positively related to bond holdings (Zhong & Xiao, 1995), and those with higher levels of debt are less likely to hold riskier assets (Weagley & Gannon, 1991).

Methods

Data Sample

The data are drawn from the 1994 KHPS, a national survey conducted by the Daewoo Economic Research Institute. The data were collected from personal interviews in 3,625 Korean households selected by a standard multistage area probability sampling technique (Daewoo Economic Research Institute, 1995). The sample in this study consists of 2,541 households who have financial assets.

Variables and Hypothesis

In this study, risky asset is defined as one with uncertainty of not receiving principal amount and interest payment. The dependent variable is the status of risky asset holding. Institutional risky asset holders are those who hold stocks or corporate bonds, and non institutional risky asset holders are those who participate in Gye or Sachae. Based on previous researches, three major factors - sociodemographic, perceived, and financial - are included as explanatory variables and hypotheses are established. Among sociodemographic factors age is expected to relate positively to risky asset holdings. The married are expected to invest in less risky assets. If the number of household earner increases, the likelihood to invest in risky assets may increase. Because, in the financial aspect, the household can have enough income sources or in the psychological aspect, can feel comfortable to have the capacity to absorb the possible investment loss. The likelihood of having risky assets may increase as education increases since better educated individuals are likely to be better informed about investment in general. Based on a previous study by Ramaswami, et al. (1992), it is expected that the salaried who can easily access information on financial assets are more likely than others to invest in risky assets; and those who have irregular jobs or who are unemployed are less likely than others to invest in risky assets. Earlier studies of risky assets have scarcely considered residence as a sociodemographic factor; however, it can be assumed to influence the choice of risky assets, from the aspect of opportunity to access financial products and related information.

Perceived factors consist of confidence in current and future family financial situation are available. Those who are confident about current and future family financial situations are assumed to be more likely to invest in risky assets.

Among financial factors, earned and unearned income are expected to be positively related to risky asset holdings. Home ownership is expected to relate positively to risky asset holdings, and that those who are in debt are less likely than those without debt to hold risky assets. Riskless financial assets are the counter concept of risky assets. Those with the capacity to recover from investment loss are expected more likely to invest in risky assets (Weagley & Gannon, 1991). Table 1 summarizes the measurement of all variables.

Analysis

To examine the likelihood of holding risky assets, probit analysis is used. Probit analysis is an appropriate procedure such as logistic regression when the dependent variable is binary (Kennedy, 1996). The model is estimated separately by type of risky assets: institutional and non institutional. For a comparison, the model for all risky asset holders also is estimated. In this study, about 23% of the respondents have risky assets from either institutional (7%) or non institutional investment (17%).

Table 1
Summary of Variables Used for Analysis: 1994 Korean Households Panel Study

Variables	**Definition / Measurement**	**Frequency or Mean** (%) (S.D.)
Dependent variables:		
Risky asset holding status	For institutional or non institutional risky assets[a]	577(22.3%)
	1 if have risky assets,	
	0 otherwise	1,964(77.3%)
Independent variables:		
Sociodemographic factors		
Age	age of household head	42.8(11.6)
Marital status	1 if married,	2,335(91.9%)
	0 otherwise	206(8.1%)
Number of earners	number of person who has income in family	1.4(0.7)
Education		
Middle school(<10 yrs.)	1 if middle school or less, 0 otherwise	762(30.0%)
High school(10-12 yrs.)	1 if high school, 0 otherwise	1,095(43.1%)
College+(13 yrs.+)	1 if college or more, 0 if otherwise	684(26.9%)
Occupation		
Salaried	1 if salaried, 0 otherwise	1,205(47.4%)
Agriculture/fishing & self-employed	1 if agriculture/fishing or self-employed, 0 otherwise	903(35.6%)
Irregular/Unemployed	1 if irregular/unemployed, 0 otherwise	433(17.0%)
Residence	1 if live in large city[b]	1,453(57.2%)
	0 otherwise	1,088(42.8%)
Perceived confidence factors		
Evaluation of current family financial situation[c]	1 if better than last year,	355(14.0%)
	0 otherwise	2,186(86.0%)
Expectation for future family financial situation[d]	1 if better than this year,	545(21.4%)
	0 otherwise	1,996(78.6%)
Financial factors		
Earned income($)[e]	Total annual earned before tax income	20,914.7(12,941.3)
Unearned income($)[f]	Total annual unearned before tax income	3,624.4(9,367.3)
Housing tenure	1 if own home,	1,599(62.9%)
	0 if not	942(37.1%)
Debt status	1 if have debts,	1,172(46.1%)
	0 if not	1,369(53.9%)
Riskless financial assets($)	Saving accounts + insurance values + government bonds	9,231.5(15,404.9)

Note :
a : Institutional risky assets include the dollar value of stocks and corporate bonds and non institutional risky assets include the dollar value of Gye (financial club) and Sachae (personal loans given).
b: The population of large city is 500,000 or more
c : Do you perceive the current economic status of your household is better than that of the last year?
d : Over the next year, do you expect the economic status of your household to be better than this year?
e : Total amount of income consists of salary income, wage received from farm and fishing business, and income from self-employed business
f : Total amount of income consists of assets income, transfer income, and other income

Results

Financial Asset Portfolio Composition

Table 2 presents financial assets portfolio composition of all households. The mean of riskless assets ($9,214) is much higher than that of risky assets ($2,190). The mean of institutional risky assets ($ 750) is less than that of non-institutional risky assets ($1,440), indicating the significance of traditional Gye and Sachae in family finance.

According to a report by Kennickell and Shack-Marquez (1992), the proportion of U.S. households that held stocks, bonds, and non-taxable bonds in 1989 was 19%, 4.4%, and 4.4%, respectively. In this study, the proportion of households who hold stocks, corporate bonds, and government bonds is 6.7%, 0.4%, and 1.4%, respectively.

Table 2
Financial Asset Portfolio Composition of Sample Households (N = 2,541)

Financial Asset	**Sample Households**		**Households Owning Each Asset**	
	Mean	Median	Mean	%
Riskless assets($)	9,214	5,167	9,440	97.6
Savings	6,074	2,222	7,749	78.4
Cash value of insurance	3,109	867	4,922	63.2
Government bonds	30	0	2,120	1.4
Risky assets($)	2,190	0	9,644	22.7
Institutional risky assets	750	0	10,640	7.0
Stocks	729	0	10,954	6.7
Corporate bonds	21	0	4,854	0.4
Non institutional risky assets	1,440	0	8,414	17.1
Sachae	941	0	15,835	5.9
Gye	499	0	3,928	12.7

Factors Associated the Likelihood of Institutional and Non institutional Risky Asset Holdings

Table 3 presents the results of probit analysis for risky asset holdings models. Those who are married, not as expected, are more likely to invest in institutional risky asset. Education has positive influence on the likelihood of holding institutional risky assets. Households with better educated heads are more likely to have stocks and corporate bonds than those with less educated heads. This result is consistent with a previous study by Ramaswami, et al. (1992). Households headed by salaried individuals are more likely to invest in institutional risky assets; and those who have an irregular job as well as those who are unemployed are less likely to invest in non institutional risky assets than those working in agriculture/fishing or self-employed. These findings support an earlier study (Ramaswami, et al., 1992) which shows employment status of household heads to be positively related to investment in stocks. The negative effect of having an irregular job or being unemployed on non institutional risky asset holding indicates a difficulty in joining Gye without a regular source of income. Since Gye requires a regular payment, usually monthly, those who do not have regular employment may not be welcomed by associates. As expected, those who live in large cities are more likely to invest in non institutional risky assets. Compared to rural living, residing in large cities increase opportunities to participate in social activities, and non institutional investment.

Higher unearned income is positively related to the likelihood of holding both institutional and non institutional risky assets. Previous studies also show a positive relationship between the level of income and risky asset holding (Cohn, et al., 1975; Haynes & Helm, 1990; Ramaswami, et al., 1992). Home ownership is positively associated with the likelihood to invest in risky assets, which is consistent with results of previous study to examine stock and bond holdings (Zhong & Xiao, 1995). Indebted households are more likely to hold non institutional risky assets. Having higher riskless financial assets increases the likelihood of holding institutional risky assets.

Summary and Discussion

This study examines risky assets holding in Korea, using data from the 1994 KHPS. About 23% of respondents hold at least one type of risky asset. Among risky asset holders, 7% invest in institutional and 17% invest in non institutional risky assets.

Those who have higher education and those who are white-collar workers are more likely to invest in stocks and corporate bonds. Those who live in a large city and who have optimistic expectations for their future family financial situation are more likely to invest in non institutional risky assets. And those who have an irregular job or who are unemployed are less likely to invest in non institutional risky assets than are those who work in agriculture/fishing or the self-employed. Earned income has no significant relationship to risky asset holdings, but unearned income has a significant positive effect. The level of riskless financial assets is positively related only to institutional risky asset holding. One possible explanation is that those who do not have sufficient financial resources to absorb a loss from investment are less likely to invest in stocks and corporate bonds; but in the case of Gye and Sachae, those resources do not affect. Debt status is positively related only to non institutional risky asset holding, suggesting that indebted households tend to participate in Gye or Sachae, where the risk of loss may be higher than with stocks and corporate bonds. Involvement in Gye or Sachae by indebted households may worsen

Table 3
Factors Associated the Likelihood of Institutional and Non Institutional Risky Asset Holdings

Variables	**Institutional risky asset holders**		**Non institutional risky asset holders**		**Risky asset holders**	
Sociodemographic factors						
Age	-0.007	(0.005)	- 0.004	(0.003)	-0.005	(0.003)
Marital status(married)	0.543*	(0.249)	0.031	(0.118)	0.140	(0.114)
Number of earners	0.016	(0.067)	0.083	(0.047)	0.076	(0.045)
Education(high school)						
middle school(<10 yrs.)	-0.069	(0.128)	-0.006	(0.083)	-0.007	(0.079)
college+(13 yrs.+)	0.376***	(0.093)	0.023	(0.075)	0.144*	(0.070)
Occupation(agriculture/fishing and self-employed)						
salaried	0.501***	(0.097)	-0.043	(0.067)	0 .133*	(0.064)
irregular/unemployed	-0.598	(0.333)	-0.451*	(0.168)	-0.525**	(0.162)
Residence(large city)	-0.118	(0.083)	0.243***	(0.065)	0.146*	(0.060)
Perceived confidence factors						
Evaluation of current family financial situation(better)	-0.037	(0.129)	0.065	(0.091)	0.055	(0.087)
Expectation for future family financial situation(better)	-0.114	(0.113)	0.185*	(0.077)	0.108	(0.074)
Financial factors						
Earned income	1.126E-6	(3.674E-6)	3.899E-6	(2.597E-6)	2.828E-6	(2.493E-6)
Unearned income	8.944E-6**	(3.343E-6)	0.000***	(2.79E-6)	0.000***	(2.782-6)
Housing tenure(owned)	0.374***	(0.096)	0.162*	(0.070)	0.253***	(0.065)
Debt status(yes)	0.034	(0.083)	0.203**	(0.062)	0.152**	(0.058)
Riskless financial asset	8.717E-6***	(2.01E-6)	-2.818E-7	(1.852E-6)	3.130E-6	(1.76E-6)
Intercept	-2.464***	(0.335)	-1.439***	(0.197)	-1.342***	(0.188)
Log Likelihood	-571.124		-1,111.590		-1,293.257	

Note :
*p<.05. **p<.01. ***p<.001.
Numbers in parenthesis represent the S.D.

their financial stability when associates miss regular payments or the club is dissolved. Those who invest in Gye and Sachae are described on the basis of two possible explanations. Due to their lack of information on purchasing stocks and corporate bonds, they select non institutional risky assets such as Gye and Sachae. In such cases, Gye and Sachae investors can be said to recognize the possible risk. On the other hand, without the conception of risk from investing in Gye and Sachae, people tend to invest in Gye and Sachae. In this case, especially for Gye investors prefer the characteristics of the social club.

As in any market, consumers in the financial market are a heterogeneous group with widely divergent interests. Information needed by the "average" investor might be quite different from that needed by more knowledgeable, sophisticated investors (Baker & Haslem, 1973). Wealthy investors might accept the expense of information acquisition in order to assure a higher return. Therefore, the focus of educators in family and consumer economics should be on those who cannot afford professional services. Educators should inform consumers of possible benefits and losses from risky asset holding and provide consumers who are unfamiliar with financial products with some background on the reputation and practical performance of risky assets. Investors who do not have investment experience, need to be educated on the options available. On the other hand, investors who hold risky assets - especially non institutional risky assets - need to be educated on how much risk they are taking and how much loss could occur.

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Consumer Interests Annual *Volume 44, 1998*

Pursuing the Harmony of Global and Local Policies On the Market Opening Based on a Korean Case

A self-administered questionnaire survey from 525 Korean consumers reveals that they are not fully ready for economic liberalization. The results of this study imply that researchers in consumer field need to pay special attention to overcome the possible discrepancies between local and global situations of market opening. Also discussed are challenged that less advanced countries face in setting up a future oriented trade cooperation with advanced countries.

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Introduction

In October 1996, Korea was admitted into the Organization for Economic Co-operation and Development (OECD) as the second Asian country in the organization. Korea is one of the few countries that have managed the transition from a rural, under developed society to a modern economic society in one generation. This phase of rapid growth began in 1963 with the establishment of a new government committed to economic development (OECD, 1996a). Since the changes in the development strategy of the Korean government in 1963, Korea's economic growth has averaged 8 percent per year during the past 30 years. The success has been based on outward-looking policies that have encouraged companies to adapt to the opportunities of world markets. Consequently, in 1995, total Gross Domestic Product (GDP) exceeded that in all except eight member countries, and income surpassed $10,000 on a per capita basis which is almost half of the OECD average (OECD, 1996b).

As the World Trade Organization (WTO) has opened a new trade era, where competition is limitless, many countries have been expanding their outward-looking policies to liberalize and open their own markets. The Korean government also has been making strenuous efforts to perform its role in the changing world trade regime and to set up a future oriented trade cooperation with advanced countries.

Despite such effort by the government, Korean consumers have mixed opinions on economic liberalization (Kim, et. al., 1994). The disagreement among consumers on the degree of market opening becomes a barrier for implementing government policy toward further opening. In order for the Korean government to pursue free trade and globalization, consumers must understand economic trends and government policies. Consumers are hesitant to accept this trend in developing countries such as Korea. There are many problems among local people when each country pursues outward-looking policies for market opening. Often, domestic consumers have a negative attitude on further liberalization of their own markets (Kim, et. al., 1994).

Local issues are an indispensable subject in pursuing the harmony of global and local policies on the global free trade. It is essential for the government to come to a mutual agreement with consumers as well as business on the market opening. In order to resolve misunderstandings between countries with different levels of economic development, it is necessary to study local problems caused by opening of the market.

The purpose of this study is to understand Korean consumers' perceptions and opinions on market opening and on OECD membership. This study also analyzes the variations in Korean consumers' opinions based on their socio-demographic background. The implications of this study will indicate options for local policies in pursuing a true globalization. In order to understand local issues about economic liberalization in Korea, a brief review of the economic history of Korea will be discussed. Then the results of the survey on know Korean consumers' perceptive opening of the market. The paper concludes with some implications about the local issues for successful globalization.

The Economic History of Korea

In 1950, Korea experienced a civil war, which killed 1.5 million people and destroyed over 40 per cent of the country's industrial facilities. The Government pursued an inward-looking industrial policy based on import substitution from the end of the civil war until 1960. During the 1960s, the First and Second Five-Year Economy Development Plan followed the export-promotion program and continued success of the promotion policy. At this time, Korean experienced for the first time industrialization and government established policies in promoting economic development. These emphasized: a) an outward-oriented development policy based on the expansion of exports; b) macroeconomic stability; and c) investment in physical and human capital (OECD, 1996b).

During the 1980s, the Korean economy entered the international economic market. United States and other trade partners began pressuring Korea to liberalize imports. The international pressure to open the domestic market to imports increased as the account surplus expanded during 1986-1988(Rhee & Lee, 1996).

In the 1990s, the Korean economy, as well as the Korean society, has been experiencing a historic transition. From an international perspective, Korea is being forced to take a much more liberal approach to international trade and investment. To stimulate the Korean economy as well as to respond to public sentiment and international pressure, the government has promoted a liberalization program that includes deregulation of certain industries, reduction of bureaucracy, and discouragement of corruption. Three major economic strategies were adopted: strengthening competitiveness of industry, pursuing internationalization and liberalization, and providing the basis for national reunification (Korean Government Registration, 1997a; OECD, 1996a).

Since 1995 the Korean economic conditions have become stabilized and overcome many difficulties (OECD, 1997). However, the domestic industrial structure has been eroding due to the high cost and low efficiency ratios undermining industrial competitiveness. Under these worsening conditions, Korea still has to compete in the world market and strengthen the manufacturing industry so that it will lead the industrial growth again. Therefore, Korean consumers may have negative feelings about the market opening.

The Methodology

The Sample

To understand Korean consumers` perceptions on the market opening, a survey was conducted of 525 adults in Seoul, Korea, between September 12 and 22, 1997. Purposive sampling on the basis of income and family life cycle stages drew the sample. The characteristics of the sample are presented in Table 1.

The Questionnaire

The questionnaire of this study is composed of 23 questions about market opening and five socio-demographic background variables. The questions on market opening are designed to find out Korean consumers' awareness of OECD, their opinions on market opening, on membership in the OECD, on the decision making criterion, on the role of consumers, and on the effects of the market opening. Socio-demographic variables include sex, age, education, occupation, and income.

Table 1
Characteristics of the Sample (N=525)

Variables		N	%
Sex	Male	251	47.8
	Female	272	51.8
Age	20s	255	48.6
	30s	77	14.7
	40s	119	22.7
	50s	72	13.7
Education	Lower	134	25.5
	Higher	384	73.1
Occupation	None	8	1.5
	Housewives	66	12.6
	College students	158	30.1
	Lower level	125	23.8
	Higher level	167	31.8
Income	Lower	187	35.6
	Middle	209	39.8
	Higher	129	24.6

[a] laborer, sales, self-owned business
[b] clerical, management, professional

A face validity test was conducted on the 28-item-questionnaire by three professors in consumer studies. Then two pilot surveys were administered among 55 consumers at an interval of two weeks. A test-retest method of reliability test was applied for 18 questions on the market opening. The average correlation coefficient was 0.723. An interval consistency reliability test was conducted for five questions on consumers' awareness on the market opening. Cronbachs' coefficient alpha ranged from 0.455 to 0.813.

Analysis Procedure

The statistical results of this study were acquired through frequencies and x^2 tests. Comparisons were made for the opinion on market opening between the results of this study and of the study conducted in 1994. Analysis for the comparison was done by .x^2 test.

The 1994 study was titled "A survey on consumer attitudes and behavior about the market opening." The sample of the 1994 study was collected from 1198 consumers in six big cities in Korea. The 1997 sample included more consumers in the twenties, with higher level of education and of occupation than those of 1994.

Survey Results on the Perceptions of Korean Consumers

Changes in Consumers' Opinion on the Market Opening

Korean consumers were willing to accept the positive effects of market opening on the basis that it would bring benefits to domestic consumers by promoting exports and improving the quality of domestic products. However, consumers did not want the domestic market to be opened immediately.

The respondents stated that consumers chose products if the product had good price-quality (47.4%), if the product was domestic and of a less competitive industry (38.9%), or only if the product was domestic (8.8%) (Table 2). These results showed changes in consumers' decision-making criteria from choosing domestic products exclusively, to directing price-quality, compared to the 1994 study. These changes in consumers' opinion implied that Korean consumers have become open-minded about the market opening.

Consumers play a major role in market opening by choosing products on the basis of price-quality in order to reinforce the competitiveness of Korean firms. The result in 1994 in Table 3 showed that the major role of consumers was to select products against a price-quality criterion (36.1%). Consumers reported that the major role of the government, in the age open market, was to reinforce supervision and regulation against harmful imported products. The major role of firms was to produce cheaper, better-quality domestic products as compared to foreign products.

Opinion on a Membership in the OECD

Opinions on membership in the OECD were analyzed and highlights of the results are as follows. The majority of the respondents (80%) were aware of OECD. Among those, 2/3 thought that Korea became a member country too soon. More than half of them believed that membership in the OECD has negative effects on the Korean economy. The main reasons for the negative response was: occupation of the Korean market by foreign capital and firms and the financial burden following requirements issued by the OECD. 43 percent of respondents who felt positive pointed out that being a member of the OECD would raise the competition power of Korean firms.

More than 2/3 thought that the frugality campaign by religious and civic organizations would be considered as a non-tariff obstacle to trade by other OECD countries. This austerity campaign was initiated at the end of 1996 as trade deficit increased and generally was not seen to be targeting imports specifically. The movement is oriented toward an overall reduction in the consumption of luxury goods and not imports (Korean Government Registration, 1997b). About 90 percent agreed to continue the movement considering the present condition of domestic economy and the lower level of Korean consumers' competencies compared to that of the rest of OECD countries. They demanded the Korean government to be aggressive in making policies to inform the domestic situation to other OECD countries. They also insisted that the frugality campaign be continued and be led mainly by consumers.

Table 2
Changes in Consumers' Opinions on the Decision Making Criterion in the Age of Market Opening

	March 1994 (N=1,198)	September 1997 (N=525)
Domestic products only	18.8	8.8
Domestic products of a less competitive industry	38.6	38.9
Price-quality	40.5	47.4
Don't know	2.1	4.4
	100.0	100.0

$x^2 = 35.613^{***}$ df = 3 ***p<.001

Table 3
Changes in Consumers' Opinions about the Role of Consumers in the Age of Market Opening

	March 1994 (N=1,198)	September 1997 (N=525)
Select domestic products only	38.1	25.6
Select products with a price-quality criterion	36.1	45.4
Frugal living and save	12.6	17.1
Active consumer complain	12.6	10.2
Don't know	0.6	1.7
	100.0	100.0

$x^2=34.268^{**}$ df = 1 ***p<.001

Variations in Consumers' Opinions by Socio-Demographic Background

The effects of market opening were analyzed by socio-demographic variables such as sex, age, education, income, and occupation. Men were more likely to consider the market opening as contributing to the quality of domestic products. Respondents with more education thought that the market opening brings benefits to domestic consumers. Respondents with more income and higher levels of occupation tended to be positive toward the market opening (Table 4).

Table 4
Variations in Consumers' Opinions on the Effects of Market Opening by Socio-Demographic Background

	Sex	Age	Education	Income	Occupation
Promote market opening more actively					
Bring benefits to domestic consumers			8.273^{**}		17.263^{**}
Necessary for increasing exports				8.820^{*}	12.536^{*}
Contribute in improving the quality of domestic products	12.035^{**}		3.823^{*}	8.321^{*}	11.591^{*}
Raise the national phase				8.475^{*}	

* p<.05. **p<.01. ***p<.001.

The decision-making criterion in the age of market opening differed significantly by socio-demographic backgrounds. Respondents in 50s, with lower education and a lower level of occupation or no job chose products on the basis of domestic products only. The major decision making criterion of those in 30s, with a lower level of occupation, and housewives was to choose domestic products at a less competitive industry. People in 20s, with higher levels of occupation and college students regarded the price-quality criterion as the major criterion in choosing products in the age of the market opening (See Table 5, 6, 7).

Table 5

Variations in Consumers' Opinions on the Decision Making Criterion by Age

	20s n(%)	30s n(%)	40s n(%)	50s n(%)
Domestic products only	12(4.7)	5(6.5)	15(12.6)	14(20.0)
Domestic products of a less competitive industry	82(32.3)	39(50.6)	50(42.0)	32(45.7)
Price-quality	148(58.3)	29(37.7)	50(42.0)	21(30.0)
Significant level	12(4.7)	4(5.2)	4(3.4)	3(4.3)

$x^2=37.243$*** df = 6 ***$p<.001$

Table 6

Variations in Consumers' Opinions on the Decision Making Criterion by Education

	High school over	College and
Domestic products only	23(17.4)	20(5.2)
Domestic products of a less competitive industry	53(40.2)	148(38.6)
Price-quality	48(36.4)	200(52.2)
Significant level	8(6.1)	15(3.9)

$x^2=23.699$*** df = 2 ***$p<.001$

Table 7

Variations in Consumers' Opinions on the Decision Making Criterion by Occupation

	House wives	College students	Lower	Higher
Domestic products only	7(10.6)	7(4.4)	23(18.5)	7(4.2)
Domestic products of a less competitive industry	36(54.5)	53(33.5)	53(42.7)	59(35.8)
Price-quality	20(30.3)	90(57.0)	43(34.7)	93(56.4)
Significant level	3(4.5)	8(5.1)	5(4.0)	6(3.6)

$x^2=45.645$*** df = 6 ***$p<.001$

Conclusion and Implications

This study analyzed the perceptions of Korean consumers on market opening. The empirical results can be summarized as follows: Korean consumers are willing accept the positive effects of market opening, but they did not want to open the domestic market immediately under the current economic conditions. The degree of resistance to market opening among Korean consumers has been weakened in recent years. Also, a majority of the respondents thought that Korea became an OECD member too soon, driven by the negative effects such as occupation of the Korean market by foreign capital and firms, and the financial burden. Approximately one half of the respondents, who are aged over 30 with a lower education and a lower level of occupation or who are housewives, had a negative opinion on economic liberalization. However, people with a positive response pointed out that being a member of the OECD would raise competitiveness of Korean firms. Most of the Korean consumers insisted on continuing the frugality campaign.

The worsening economic conditions in recent years, and the resistance to fast economic liberalization by some domestic consumers challenges the Korean governments in setting up a future oriented trade cooperation with advanced countries. The government needs to educate consumers who have negative opinions on market opening about the positive effects of free trade brings to the domestic economy. A nation-wide effect for consumer education has to be developed to improve consumers in rational decision making.

As we move into the 21st century, globalization is in full swing and the world is becoming a global village. Globalization is propelled by the free flow of world trade, that is, a common rule of free competition in the economic sector. However, we have witnessed a number of incongruities in economic development not only between underdeveloped and developed countries but also between Eastern and Western countries with differences in cultural background (Kim, 1997; Korean Government Registration, 1997c). To make the world a true global village, we need to look beyond our own physical and mental borders to find a way to blend in with our surroundings.

Presently, the United States is the model that all other countries aspire to emulate. However, people in developing countries believe that the United State only seeks its own end by reorganizing the world trade order (Song, 1997). On the other hand, the U.S. administration has a misunderstood preconception that there is a climate of bias against foreign products in developing countries, including Korea (Civic group angry over U.S. auto sanctions, 1997). Consequently, there are many possibilities of a bilateral trade war between countries, especially one with the U.S. These discrepancies and misunderstandings between countries will have negative effects on constructing a global village.

Therefore, we need to better understand consumers' way of living and thinking in each country and adapt the world's rules and standards so that we can reach the highest level of harmony among countries in a global village.

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Endnotes

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Studying Welfare Reform: Challenges and Opportunities

Welfare reform has brought major changes in the scope, structure and impact of most programs targeted to the low-income population. This paper describes the methods being used in Iowa to conduct a comprehensive baseline study of welfare reform. The "Family Well-Being and Fiscal Reform in Iowa" project, a cooperative effort by Iowa State University researchers and extension staff involves state- and community-level policy case studies as well as qualitative and quantitative analyses of family well-being.

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Introduction

The *Personal Responsibility and Work Opportunity Reconciliation Act of 1996* (PL 104-193) brought major changes in the scope, structure and impact of most programs targeted to the low-income population, including cash assistance, food stamps, Medicaid, Supplemental Security Income (SSI), child welfare and child support. With transfer of significant authority to states for the design and implementation of programs, attention has shifted to the changes occurring and consequences at the state and community level. Major fiscal reform of programs was initiated in federal fiscal year 1997 by the shift to a new funding schema under the Temporary Assistance to Needy Families (TANF) federal block grant to the states. However, for many states, changes in welfare programs began earlier as states experimented with programs and formulas to make existing programs more effective in moving recipients into jobs and off of public programs. Iowa initiated the Family Investment Program (FIP) in 1993, which merged and coordinated several existing programs and tied support for job training, child care and transportation more directly to income transfers (Jensen & Fletcher, 1997).

The purpose of this paper is to describe the methods being used in Iowa to conduct a baseline study of welfare reform. The project, known as "Family Well-Being and Fiscal Reform in Iowa," is a cooperative effort of Iowa State University Extension and the newly-formed Iowa State University Center for Family Policy (a unit of the College of Family and Consumer Sciences). Iowa State University is coordinating research and extension efforts to address the problems and conduct an evaluation of the effects of changes in funding and design of existing welfare programs. Iowa State University Extension has chosen to invest significant financial and human resources in this project because of its importance to the well-being of the state, its communities and its families.

Before discussing the overall study design and detailing the methods used, background information on Iowa's social, political, and economic climate and its welfare reform efforts is presented. Then the overall study design is outlined, followed by discussions of the state, community and family components of the project. Conclusions and implications are presented in the final section of the paper.

The Iowa Situation

Iowa is a state with a relatively large rural sector, an older population (especially in rural areas), a large farm sector and relatively low unemployment rates. In the late 1980s, Iowa embarked on a study of its welfare system that led to major changes in its cash assistance and job training programs. In 1987, Governor Terry Branstad issued an executive order establishing the Welfare Reform Council -- a council composed of the directors of six agencies in state government: Human Services, Economic Development, Education, Employment Services, Management, and Human Rights. Since that time, welfare initiatives in Iowa have been developed through multiple agency collaboration.

Recognizing the value of the collaborative approach, the State Human Investment Policy Council -- an expanded group that included agency directors, legislators, and representatives from the private sector, including business and labor -- was established in 1992. This group developed recommendations that addressed welfare reform, economic development and workforce development. As a result of their efforts, state laws, including new welfare reform initiatives, were passed in 1993. The primary goals of this legislation were:

- to establish a Family Investment Program (FIP) through which former Aid to Families with Dependent Children (AFDC) recipients would develop plans for self-sufficiency;
- to provide incentives for employment, including disregards for earned income; and
- to provide work and training services to welfare participants.

In October, 1993, FIP began to be implemented with new income and resource provisions. In January, 1994, the Family Investment Agreement (FIA) policies began to be implemented. The FIA outlined a contract between the state and the recipient that described activities that would lead the recipient toward self-sufficiency. Failure to meet the expectations in the FIA could lead to termination of cash benefits. As a result of implementing FIP, Iowa has seen a reduction in the welfare caseload and the recidivism rate is going down (Wiberg, 1997).

Following passage of the federal welfare reform legislation in August, 1996, Iowa, like other states, engaged in statewide discussions before submitting its state plan for Temporary Assistance to Needy Families in November, 1996. Because of its earlier work to design the FIP program, Iowa made relatively few changes in its basic cash assistance and job training programs. TANF was implemented in Iowa in January, 1997.

Although an extensive evaluation of FIP -- conducted under contract with Mathematica, Inc. and the Iowa-based Institute for Social and Economic Development -- continues under TANF, the policy changes required under the federal legislation have a much broader scope. There is a need to take a comprehensive view and monitor a broad set of policies that affect income maintenance, workforce development, social support systems and health care delivery. The "Family Well-Being and Fiscal Reform in Iowa" project analyzes policy at the state level, monitors how policy plays out in local communities, and assesses the effects of changes in policies and programs on family and child well-being. This paper describes the collaborative effort of research and extension to draw on multidisciplinary methods and models to monitor welfare reform.

The Overall Project

Our project builds upon the comprehensive research protocol developed by the Urban Institute for its "Assessing the New Federalism" multiyear study of welfare reform. In cooperation with the Urban Institute, we are using their protocols to conduct a state-level policy case study, seven community case studies, and a comprehensive telephone survey of family and child well-being (Urban Institute, 1996). In addition, we are building a county-level data set on social and economic indicators to evaluate how welfare indicators relate to local economic performance and labor market indicators. We also are conducting in-depth interviews with FIP and SSI recipient families in the seven targeted communities. Based on findings from these interviews, we plan to conduct a statewide household telephone survey in 1998. Our goal is to monitor the changes that occur in policies and programs at the state and local level and to observe changes in family well-being over time. Our current findings will serve as a baseline when we repeat all phases of the study in two or three years.

The State View of Welfare Reform

Drawing upon the research protocol developed by the Urban Institute to study 13 states, we conducted an intensive case study of the development and implementation of policies in Iowa. The case study review was carried out by two different teams, one concentrating on developments in Medicaid and closely related health assistance programs and the other concentrating on developments in welfare, employment and training, and social services. The teams discussed policy developments and objectives with legislative and executive branch officials and with representatives of the nonprofit and private sectors. Interviewer teams were composed of campus faculty and extension staff who were trained in the research protocols in June, 1997. Interviews were conducted in the last six months of 1997. A second round of interviews is planned for 1999 or 2000.

Personal interviews were conducted with more than 20 administrators and staff in the Iowa Departments of Human Services, Education, Workforce Development, Human Rights, Management, and Health. About ten representatives of various statewide nonprofit organizations such as ecumenical ministries, a homeless coalition, and family and children advocates were contacted. In addition, key legislators and representatives of the association of county governments, business and industry also were interviewed.

Each state-level interview addressed the administrative structure of the agency or organization, the vision and goals for low-income families and children, recent changes in funding and budget initiatives, program success, and future policy changes. Two team members conducted each 1 1/2-hour interview, taking copious notes and gathering relevant documents from each key informant. Following each appointment, the interviewers reconstructed the responses as closely as possible in written form, referring to documents provided by the informant as necessary.

Cross checks between the two interviewers allowed for necessary corrections and negotiation of any discrepancies before the final copy of the interview was filed, ready for analysis.

Information collected in the interviews and printed materials is being used to compile a state-level case study about Iowa's welfare reform initiative. The state case study provides a context for the subsequent analysis of the community and household data.

Evaluating Welfare Reform at the Community Level

Two different methods are being used to monitor the implementation and effects of welfare reform at the community level. One project involves creating a database to track secondary sources of social and economic data at the county level. The other involves community case studies. Our first step was to identify seven Iowa communities to be studied. Selection criteria for the target communities included population size, presence of a sizable Hispanic population, adjacency to a metropolitan area, and geographic dispersion across the state. Communities were selected from a list that extension staff nominated for inclusion in the study. Because of the important role that local staff played in conducting community and household interviews, this local commitment was an important criterion. The communities selected ranged from an extremely rural community with a population of 1,800 to a growing metropolitan community of 109,000.

Analyzing Economic and Fiscal Impacts

Economists are developing county data sets on social and economic indicators to evaluate how these welfare indicators relate to local economic performance and labor market indicators. Investigators have summarized key Census and economic data for the seven targeted counties and have compared these indicators with communities of similar size (using Beale code classifications). The long-term goal of this project is to incorporate these welfare-related policy indicators into a county level fiscal impact model and to apply this model to the targeted communities in Iowa. These descriptive data provide a rich context for the second community-level data collection effort, the community case studies.

Conducting Community Case Studies

The community case studies have required a major investment of the time and talents of extension staff who work in the seven targeted communities. In June, 1997, teams of four to six extension staff from each community were trained to conduct interviews with community key informants and with households. Following the Urban Institute's protocol, we provided each interviewer with an extensive training manual and demonstrated interviewing and note-taking techniques. Data collection methods for a community-level case study consisted of personal interviews with key administrators in local human service agencies, local government, health providers, and the private sector. Line workers in income support and child welfare agencies participated in group discussions of two vignettes that described two hypothetical families in need of assistance. Because of their familiarity with the community, the local extension staff were in an excellent position to identify the respondents. Teams of two staff members interviewed each community respondent and used the same note-taking and cross-check process used in the state-level interviews. In addition, each of the community interviews and vignettes sessions was tape recorded for future analyses. Each team interviewed 9 to 16 key informants and conducted two "vignette sessions" with line workers who serve families in their community.

All community interview data (disks and hard copy of interview notes, audiotapes of interviews, and accompanying documents) were forwarded to campus project staff for analysis. Campus faculty who are analyzing the community case study data have traveled to each of the seven communities to conduct a debriefing session with the interview team following completion of data collection. The purpose of these sessions was to gather overall impressions and to ask the extension staff for their own assessments regarding community capacity to respond to welfare reform issues. Using text analysis software, community sociologists are identifying common themes and issues in the data. Reports summarizing each community case study as well as a comparative analysis across all communities are being prepared to be shared with community leaders and policy makers. We expect to place considerable emphasis on the analysis of any rural and urban differences identified in the data.

The View from the Bottom

One of the most important components of the evaluation of welfare reform is the view of its intended beneficiaries, the recipients. The completion of in-depth ethnographic interviews with a few families in each of the seven communities was selected as an appropriate method for several reasons. First, ethnographic interviews would permit the respondents to tell their stories in their own words, with their own emphasis (Spradley, 1979). Second, although the analysis of the resulting interviews would be difficult, the data collection could be accomplished by the same extension staff who conducted the community informant interviews. Two different groups of respondents were targeted: current participants in the Family Investment Program (FIP) and recently terminated recipients of Supplement Security Income (SSI) available to families with a disabled child.

Gathering Data from FIP Participants

The Sample. The goal was to select families to be interviewed from a community-wide list of welfare recipients, something only available from the Iowa Department of Human Services (DHS). Iowa State University was able to obtain the complete list of FIP recipients for each of the seven counties in which the target communities were located.

A random sample of 15 names in each community was selected from the DHS lists. The only exceptions to this process were in the two communities deliberately selected because of large Hispanic populations. In those two communities, families with Hispanic surnames were sampled separately; six names were chosen randomly from the Hispanic list, and nine were selected from the nonHispanic list. Although this method of stratification is clearly subject to error, it was the best that could be done under the circumstances. A comparison of the number of Hispanic families identified in each community to the number of nonHispanic families indicated that a simple random selection would probably have yielded about the same division of Hispanic-nonHispanic families.

The 15 potential respondents were sent a letter that explained the project and indicated that two members of the Iowa State University Extension staff that served the community might be stopping by their home to ask them to participate. Calling ahead for appointments was not recommended because of the potential for the respondent to be absent at the time of the appointment. It was further suggested that the interviewing team try to obtain the interviews during the late afternoon, evenings, and weekends, to maximize the possibility that the respondent would be home. Interviewers began with the first name on the list and proceeded through the list until five interviews had been obtained. Interviewers used the same methods in conducting the household interviews as they used in the community interviews. Two team members participated in each interview, taking detailed notes and tape recording the interview. Following the interview, the field notes were combined into one set of interview notes.

All community teams were offered the assistance of interviewers who would be able to conduct the interviews in Spanish. Four of the six Hispanic names in one community were identified by local DHS staff as nonEnglish speaking. A Spanish version of the respondent letter was prepared and mailed to the four families. Two of the four families were interviewed by Spanish-speaking interviewers.

All respondents were given a $20 gift certificate to a local restaurant or grocery store at the end of the interview. A gift certificate (as opposed to a $20 bill) would not need to be reported as income, and so would not affect subsequent FIP benefits.

The Interview Protocol. The interview protocol was a combination of structured and semi-structured questions. The structured portion of the interviews consisted of a series of questions to gather demographic information about all of the individuals living in the household: age, gender, relationship to the respondent, level of education, whether the individual was currently a student, his or her health and marital status, and, for those aged 16 and over, employment status and occupation. This table, adapted from several earlier studies conducted by one of the investigators (Winter, Morris & Murphy, 1993; Winter, Morris, Gutkowska, Jezewska, Paleszeweska-Reindl, Grzeszcask-Swietlikowska, & Zelazna, 1995) was administered at the beginning of the interview. The second structured portion, administered at the close of the interview, was a scale of material hardship, adapted from Eden and Lein's recent study of single mothers (Eden & Lein, 1997).

In between the two sets of closed-ended questions, the interviewers posed a series of open-ended questions designed to encourage the respondent to talk about his or her life. Interview topics included: daily and weekly routines; family relationships; support networks of extended family and friends; housing and transportation; current or previous employment; income sources; and current and previous interaction with the welfare system. Areas to be covered and potential questions were adapted from Eden and Lein's work and the ecocultural family interview method developed by Weisner and his colleagues at UCLA's Neuropsychiatric Institute (Weisner, Gallimore, Nihira, Bernheimer, & Coots, 1995).

Gathering Data from SSI Recipients

Because the reevaluation of SSI benefits to low-income families with a disabled child was a part of the federal welfare reform legislation, interviews with SSI families whose benefits had been terminated were thought to be an essential part of our project. With the assistance of The Iowa Child Health Specialty Clinic at the University Hospital School, University of Iowa, we attempted to identify families in our seven communities who had been terminated from SSI benefits. Although they could not release the names of SSI recipients, they agreed to include a flyer in regular mailings to SSI families describing the project and asking those interested to call a toll-free number if willing to participate in our study.

Although many of the issues faced by SSI recipients and FIP recipients are similar, there are differences. For that reason, it was decided that the ISUE field staff would not interview those volunteering from the SSI mailings. Instead, a sociologist on the campus project team whose specialty is qualitative methods and whose area of expertise is women's health issues adapted the protocol to fit the SSI families, and conducted these interviews.

Analysis of Household Data

We now have a rich set of 40 in-depth interviews with Iowa families who have been directly affected by changing welfare policies and programs. It is our plan to analyze these data using an approach similar to the one used in analyzing the community interviews. The interviews have been coded and entered into a text analysis software program that permits us to identify reoccurring themes across households. We will search for similarities and differences in the life experiences of households in the rural and urban settings. The state and community case study findings should provide important contextual information to better understand issues facing these families.

Our current plan is to track these families over time, re-interviewing all households every six months. In 1998, we intend to use findings from these data to inform and shape a large telephone survey of Iowa households. The purpose of the larger survey is to gather a comprehensive baseline measure of family and child well-being at an early stage of the implementation of the federal reforms. The core of this questionnaire will be the same survey instrument used in the Urban Institute's household survey. However, we intend to oversample rural households and develop some unique questions based on findings from our qualitative study of families in the seven Iowa communities.

Conclusions

It is premature to draw conclusions regarding findings from Iowa's "Family Well-Being and Fiscal Reform" baseline study, however we can assess the process and how it has worked to date. The issue of welfare reform offers the university, and particularly the land-grant university, an opportunity to integrate its extension and research functions and respond to a societal issue that has the potential to change dramatically the roles of state and local governments and supporting organizations. In Iowa, extension educators have become field researchers as we build a data base using multidisciplinary models and multiple methods of inquiry. We have augmented a significant financial investment by the university with a major human investment of extension staff time and talents. Early reports suggest that the process of conducting the state policy case study has opened doors and made new contacts for the university with a wide range of key leaders in state and local government and non-governmental organizations. At the community level, extension staff report that the community and household interviews have been an invaluable way for them to listen to the needs at that level. It has positioned extension in a somewhat unique role in the community-level debate and has given these staff a much broader perspective of the community than they had experienced previously in their traditional role as educators. It is clear that the exercise of data gathering has been an intervention for both extension and those interviewed. It has heightened awareness of potential issues and may serve as a catalyst for policy and program response.

Monitoring change, documenting fiscal developments associated with program changes, and tracking the impacts on families is both a challenge and an opportunity for the university. Welfare reform is an extremely complex policy issue that demands our best theoretical, empirical, and methodological skills. We believe welfare reform has given us an opportunity to realign resources, stretch our disciplinary and methodological horizons, and build a stronger partnership between research and outreach in creating as well as applying new knowledge.

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Consumer Interests Annual *Volume 44, 1998*

Work Efforts and Welfare Receipt by Poor Single Mothers: The Impact on Children's Behavior Problems

Economic deprivation and psychological distress significantly influence children's behavior problems living in poverty and growing up in single mother families. Using the 1992-94 round of NSFH data, this study examines factors affecting children's behavioral problems, focusing on work effort and welfare receipt by poor single mothers. Findings indicate that maternal employment and welfare receipt increase the probability of children having behavior problems. Implications are discussed.

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Introduction

Increased out-of-wedlock births and marital break-ups over the past two decades have led to growth in the number of poor single-parent families with children. Single mother families with young children have received particular attention, because unwed mothers or children with absent fathers have been major recipients of public assistance. There is a broad consensus in the literature that single motherhood is closely related to poverty, although those poor are diverse and the problems are complicated (Blank, 1997; Eggebeen & Lichter, 1991; Harris, 1993; O'Hare, 1996).

The growth in single mother families and their high likelihood of being in poverty are reflection in high rates of child poverty. In 1995, one out of five children under the age of 18 lived in families with cash incomes below the poverty line, and about 25 % of children under age 6 lived in poverty in the U.S. Moreover, 50 percent of children in female-headed families were in poverty (Federal Interagency Forum on Child and Family Statistics, 1997). The increasing number of children in poverty from single mother families raises concern about the cumulative impacts of poverty on the development, health, behavioral and cognitive outcomes of children (Blank, 1997; Hao, 1995; McLeod & Shanahan, 1993; O'Hare, 1996). Furthermore, single parenting and the absence of fathers from their households negatively affect children's socialization, role models, norm internalization, and future orientation, putting children at a greater risk of behavioral problems (Blank, 1997; Krein & Beller, 1988). Therefore, young children who are growing up in an economically disadvantaged environment and are also living with one parent deserve special attention and should be a main focus of policy debates and research.

Since President Clinton signed the Personal Responsibility and Work Opportunity Reconciliation Act on August 22, 1996, concern about the impact of welfare reform on single mothers and their children have been raised. The new law replaced Aid of Families with Dependent Children (AFDC) with state block grants, and Temporary Assistance for Needy Families (TANF), thus terminating a 60-year program of federal entitlements. Welfare reform efforts under the Clinton administration are designed to eliminate entitlements, restrict cash assistance, and require work of the able-bodied (Gnezda, 1996). Hence, the labor force participation of single mothers in poverty has become the centerpiece of debate.

The relationship between maternal employment and children's outcomes has been comprehensively investigated, although most studies have been conducted with middle-income or high income families. In contrast, little attention has been focused on the effect of maternal employment on children in poor or low-income families (Moore & Driscoll, 1997; Vandell & Ramanan, 1992; Zaslow & Emig, 1997). The effect of welfare receipt on children's behavior outcomes has received little attention (Hao, 1995).

The purpose of this study is to enhance understanding of single mothers and their children aged 5 to 17 in poverty. The analysis seeks to identify predictors associated with children's behavioral problems among single mother families (N= 167) living below the poverty line, using the 1992-94 round of the National Survey of Families and Households (NSFH 2). Probit analysis is conducted to identify the factors affecting the likelihood of children having behavioral problems among the single mother families. Throughout this study, the focus is on whether and how welfare participation and employment of poor single mothers influence

Literature Review

Poverty and single motherhood, in general, have adverse effects on children's development and behavior outcomes. According to Baydar and Brooks-Gunn (1991), children raised in poor single mother families are more likely to have behavioral or cognitive problems than children from two-parent families. McLeod and Shanahan (1993) found that the stress of living in poverty has a detrimental effect on children's mental health. They indicated that a lifetime experience of poverty as well as a current poverty situation generates antisocial behavior, anxiety or depression, and peer conflict. For young children, single parenting and the absence of fathers from the household further strengthen the negative effects of poverty. Based on the household production theory, Krein and Beller (1988) wrote that single parents have fewer parental resources for human capital investment in children than married couples. Thus, children living in single parent families show lower educational attainment. Hao (1995) confirmed that compared to intact families, single-mother families degraded cognitive and emotional environments. Children of single mothers revealed lower reading abilities and greater behavior problems than their counterparts from two parent families.

The effects of maternal employment on children's outcomes have been extensively investigated. Much attention has been given to children in middle income families (Goldberg, Greenberger, & Nagel, 1996; MacEwen & Barling, 1991), whereas the relationship between employment by poor single mothers and children's outcomes has received little attention (Moore & Driscoll, 1997; Vandell & Ramanan, 1992; Zaslow & Emig, 1997).

Mother's employment was found to be negatively related to children's outcomes in middle-income or high-income families. But, maternal employment tended to have a positive or neutral impact on children's development and outcomes in low-income families (Baydar & Brooks-Gunn, 1991; Goldberg et al., 1996; Moore & Driscoll, 1997; Vandell & Ramanan, 1992). It appears that economic security and the advantages resulting from maternal employment may offset negative effects on children in low-income families. Increased market goods or services, at the expense of time spent in child care and parenting, are perhaps more effective for poor children than those for middle or high income children.

The impact of public assistance on children's outcomes has not been extensively explored in the literature. Hao (1995b) examined the effects of public assistance on children's developmental outcomes, using the National Longitudinal Survey of Youth (NLSY) data. She found that public assistance contributed to alleviating the economic hardship and psychological stress of poverty, improving emotional and material environments, and positively affecting children's outcomes. Simultaneously, public support had an adverse effect on children's developmental outcomes by increasing the parent's and child's anxiety over stigmatization and isolation. She found that school age children's reading ability and behavior problems were negatively affected by AFDC experiences.

Methodology

Data and Sample

The data for this study were from the 1992-1994 National Survey of Families and Households (NSFH), extensively collected and examined by the Center for Demography and Ecology at the University of Wisconsin-Madison. The subsample utilized in this study is from the 1992-94 wave. All information is in reference to one "focal child" selected randomly from all children in the household. The respondents in this study are mothers with children between the ages of 5 and 17 and also living below the poverty line (n=339). Of the sample, over 49 % account for single mother families (n=167). Sample characteristics and children's behavior problems are contrasted by household type. In this study, our attention is limited to children growing in poor single mother families for multivariate analysis.

Variables and Hypotheses

Children's behavior problems are measured by mother's reports to the questions: Whether the child is difficult to raise; whether the child has repeated their grade; whether the child has been in trouble with police; whether the child has skipped or cut off school; whether the child has seen a doctor or therapist about emotional or behavior problems; and whether mothers have been called in to meet with a teacher or principal, because of a behavior problem.

The independent variables are drawn from findings of previous research and include current work effort of the single mother, public assistance, mother's characteristics, family structure, and child characteristics. Previous research indicated that mother's work effort positively affected low-income children's behavioral and cognitive outcomes by offsetting the negative effect of economic deprivation. It is hypothesized here that mother's work effort will lower the likelihood of children having behavioral problems. Increased income from public assistance may provide a better environment with economic security, but welfare receipt imposes psychological strains on children and their mothers. Therefore, it is expected that welfare receipt will induce behavioral problems of children. Welfare receipt in this study is broadly defined as public assistance including AFDC, food stamps, housing assistance, or energy assistance.

Greenstein (1993) found that the younger mothers are, the more behavior problems their children have. So, it is hypothesized that mother's age would be negatively associated with children's behavior problems. In a study of Desai et al. (1989), black children showed lower intellectual abilities than children of other race. Other studies did not find that race made a significant difference in children's outcomes (Greenstein, 1993; McLeod & Shanahan, 1993). It is hypothesized that black children are more likely to have behavior problems than non-black children, holding other factors constant. It is expected that never-married mothers are more likely to have children with behavioral problems than previously married mothers. Poverty status 5 years ago is proxied for poverty continuance, which may influence socialization, life style, and value system of children. It is expected that poverty continuance will induce the negative outcomes of children. Urbanization of residence and region variables also are expected to influence the probability of having behavior problems. O'Hare (1996) emphasized that the geographic concentration of poverty exacerbates the negative consequences of being poor for children. Mothers' education represents their human capital regarding child-rearing, and parenting. It is hypothesized to influence children's behavioral outcomes positively. In contrast, mother's chronic illness threatens to reduce mother's effort and time spent in parenting and child care. The presence of mother's chronic illness is expected to increase the probability of having children behavior problems.

Family structure variables include the number of adults other than mothers in the household and presence of other support. The presence of other adults may reduce mothers' burdens of household work and child care. Single mothers rely on both public and private supports to cope with financial hardship. The presence of other support tends to supplement public aids and relieve financial strains (Hao, 1995). Here, other support is measured by whether or not they have received child support, alimony, or other family support. Both family structure variables are expected to decrease the likelihood of having behavior problems. Controlling for child characteristics is important, as literature suggests that children's behavioral outcomes and development differ by age and gender (Goldberg et al., 1996; Hao, 1995; Krein & Beller, 1988; Vandell & Ramanan, 1992).

Analysis

Means and frequencies were examined to investigate the sample characteristics by household type. Probit analyses were conducted to explore factors affecting the likelihood of children having behavior problems, because dependent variables used in the analysis are dichotomous variables. Probit models have more appropriate specifications of the distribution of the disturbances by assuming that error variances are normally distributed (Ben-Akiva & Lerman, 1993). Marginal effects were estimated to indicate the change in the probability due to one unit increase in each independent variable.

Results

One hundred sixty seven single mother families were compared to 172 two parent families. Single motherhood, given that both groups were in poverty, made a significant difference on children's behavioral outcomes. Chi-square tests confirmed that children of single mother families had more negative behavior outcomes than those of two parent families: More children from single mother families had repeated a grade; had been expelled or suspended from school; had been in trouble with police; or had skipped school than their counterparts. More single mothers had seen a principal or teacher for their children's behavioral problems than had married mothers.

More than 76% of single mothers participated in some sort of welfare program, whereas only 30% of two parent families were on welfare. Although they were eligible for public assistance programs, more single mothers received welfare than married mothers. Over 80% of single mothers reported that they were in poverty 5 years ago, compared to 62% of married mothers who had been in poverty line at that time, meaning that poverty has been more persistent for single mother families than for married couples. Few single mothers, approximately 5 % of the sample, were employed. On average, single mothers worked 2 hours per week, while married mothers worked 5.5 hours per week. Married mothers had a greater number of other adults living together in their households than single mothers. Two parent families had higher household incomes than single mother families. More single mother families resided in urban area than their counterparts.

Results of the probit analysis for single mother families were presented in Table 1. Behavior problems of children were used as dependent variables of each probit model. Likelihood ratio tests for each behavior problem indicated that probabilities of having children expelled or suspended from school, and of having seen a teacher or principal for children's behavior problems were well estimated, whereas the other behavioral models were inestimable or were not found to have any significant results. Welfare receipt was found to be a significant predictor of having the child expelled or suspended from school. In other words, children of welfare mothers were more likely to be expelled or suspended from school than children without welfare. Age of mother was positively related to the likelihood of having children expelled or suspended from school. It was unexpectedly found that mother's education increased the likelihood of having children expelled or suspended from school, controlling for other variables. Mother's health status also was important factor associated with children's behavior problems. Children whose mothers had chronic illness were more likely to be expelled or suspended from school than those with healthy mothers. Age of children was found to be a significant predictor associated with this behavioral problem. It had a nonlinear relationship with the behavior problem. Children were more likely to be expelled or suspended from school up to the age 10. After that age, they were less likely to be expelled or suspended from school. Coefficients of marginal effect indicated the change in the probability of having children expelled or suspended from school when one unit in each explanatory variable increased.

The probability of seeing the teacher or principal for children's behavior problem showed similar findings. Work effort and welfare receipt, key variables in this study, were significant. Previous studies suggested that maternal employment had a positive effect on outcomes for children in low-income families. This study based on single mothers in poverty produced contrasted results. When single mothers spent more hours in market work, they were more likely to see the teacher or principal for children's behavior problem. Receipt of public assistance increased the probability of seeing the teacher or principal for behavior problems. As household income increased, mothers were less likely to see the teacher or principal for behavior problem, holding others constant. As expected, presence of chronic illness increased the likelihood of seeing the teacher or principal for behavior problem. Gender of children made a significant difference. Consistent with literature (Vandell & Ramanan, 1992), boys were more likely to experience behavior problems than girls.

Discussion

This study provides information about implications for children when poor single mothers work or participate in welfare programs. With respect to maternal employment, studies consistently suggest that it had positive or neutral effects on outcomes of the low-income children. This study, however, runs counter to previous findings. As mothers increase the number of hours worked, their children are more likely to be expelled or suspended from school. Primarily, these children are raised under poverty-stricken families headed by single mothers. McLeod and Shanahan (1993) indicate that children in poverty are highly likely to suffer from poor nutrition, hazardous environments, violent crime or criminal victimization. It might be that the detrimental impacts of poverty combined with single motherhood reinforce the negative effects of maternal employment by outweighing the economic advantages and improved material environment due to maternal employment.

On the other hand, labor market characteristics such as low wage and poor working conditions possibly contribute to children's behavior problems by influencing mothers' parenting behavior and psychological aspects negatively (Zaslow & Emig, 1997). Single mothers in poverty, who may represent less-skilled labor force, endure low earnings, job instability, and lack of health benefit in the workplace (Blank, 1997). Efforts to improve the job conditions of poor single mothers and to enhance their human capital should be accompanied in order to reduce poverty and increase the well-being of children and the families. In addition, role dissatisfaction and interrole conflict due to simultaneous role of mother and employee cause personal strains and negative parenting behavior, undermining the positive effects of maternal employment (Goldberg et al, 1996; MacEwen & Barling, 1991). Thus, it is suggested that parenting behaviors or skills should be taken into account as an important mediator.

Since the passage of the new welfare law in 1996, the poor single mothers are mandatorily enforced to participate in the labor force, work-related activities, or job training programs. Notice that mother's work effort discussed here is voluntarily made, reflecting individual willingness and preference. The effects of maternal employment of their own volition may be different from the impacts on children of mandatory participation by their mothers. Hence, it is very important to reveal whether and how mandatory work requirement would influence the poor single mother families and their children in the future.

As expected, children with welfare receipt were more likely to have behavior problems than those were not on welfare. Hao (1995) mentioned that welfare had both positive and negative effects on children's developmental outcomes at the same time. The finding of the probit analysis revealed that welfare receipt was a highly significant predictor associated with children's behavioral problems. She stated that public assistance imposes the anxiety over stigmatization and isolation from society on both mothers and children. That is, negative impacts of welfare receipt

99

offset the positive effects like increased economic security. If current welfare system based on income testing and labeling continues to persist, stigma and negative characterization will be highly connected to welfare receipt, which in turn causes children's behavior problems.

Table 1.
Results of the Probit Analysis of Behavior Problem for the Single Mother Families

Variables	**Expelled or suspended from school**		**Seen a teacher or principal for behavior**	
	Coefficient	Marginal effect	Coefficient	Marginal effect
Intercept	4.688 (2.296)*	-.733(.368)*	3.166 (2.031)	-.719 (.456)
Key Variables				
Work effort	.016 (.016)	.0025 (.255)	.026 (.0136)*	5.8E-03(3E-03)*
Welfare receipt	1.497 (.528)**	.234(.077)**	1.256 (.448)**	.285 (.093)**
Mother Characteristics				
Age	.865 (.278)**	.135(.047)**	-.045 (.0403)	.075 (.053)
Black	.241 (.367)	.037 (.057)	-.186 (.32)	-.043 (.072)
Never married	.257 (.334)	.402 (.053)	.127 (.293)	.028 (.066)
Poverty status 5 years ago	-.502 (.471)	-.078 (.072)	-.696 (.434)	-.158 (.095)
Urbanization	.018 (.012)	.0027 (.001)	.015 (.009)	.003 (.002)
Northeast	.115 (.423)	.018 (.066)	-.593 (.403)	-.135 (.0904)
North Central	.003 (.435)	.0004 (.068)	.405 (.38)	.092(.087)
West	-.21 (.486)	-.033 (.075)	-.154 (.426)	-.035 (.096)
(South)				
Education	.127 (.73)*	.019 (.011)*	.029 (.051)	.0067 (.012)
Income	-.0003(.0004)	-5E-06(6E-06)	-8E-05(.0004)*	-2E-04(9E-06)*
Chronic illness	.634 (.331)*	.099 (.051)*	.685 (.287)*	.156 (.064)*
Family Structure				
Number of adult	.0025 (.232)	.0034 (.036)	.193 (.207)	.044 (.046)
Other support	-.367 (.328)	-.057 (.051)	.183 (.272)	.042 (.062)
Child Characteristics				
Age	.865 (.278)**	.135(.047)**	.331 (.234)	.075 (.053)
Age square	-.036 (.01)**	-.006(.002)**	-.014 (.011)	-.003 (.0024)
Gender	.018 (.302)	.003 (.047)	.733 (.281)**	.167 (.063)**
Log Likelihood	-54.83		-69.369	
Chi-squared	47.597***		37.904**	

Note: Standard Errors are in parenthese.
*p<.05. **p<.01. ***p<.001.

In this study, our attention is limited to children raised by single mothers living in poverty. Future study is suggested to extend to children of all poor families. Parent's poverty automatically is transferred to children. Many studies warn about the adverse effect of poverty on children's outcome, because children growing up in poverty are least likely to reach successful adulthood due to the failure in school. This study confirmed that more children under single motherhood showed behavior problems than children of married couples. Considering the fact that single mothers with young children disproportionately make up the poor population, we caution about the cumulative effects of poverty on children. Child poverty associated with single motherhood might lead to generational transmission of poverty (Krein & Beller, 1988; Hao, 1995).

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Endnotes

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Reinventing the Power Community: Welfare Reform in the Cyber Economy

Based upon research reported in a new text of welfare reform, a proposal for welfare reform based upon personal choice and an economic contract is presented. At the essence of the strategy is the socialization of work and its impact upon families who seek an identity within a rapidly changing economy where low-skill jobs are more difficult to find. The welfare reform proposed builds upon the importance of home ownership, parental involvement, and capitalism.

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Beaking the Cycle of Despair

While welfare support systems have been generally designed to assist families in financial need for short periods of time, they have turned out to be permanent in many instances for an increasing number of households over the past decades (Kaus, 1992). Within a 'cyber economy' reflecting a 'fast-pace' ever changing marketplace where computers play a significant role in planning, organizing and implementing business practices to get the best results, the difficulties associated with finding suitable employment [beyond that of a minimum wage] for those presently receiving financial assistance remain. As technology enables the substitution of people with machines, competition for good paying jobs becomes more intense. In view of the intensity of the global marketplace and international pressures to reduce employment costs in order to compete, many welfare recipients do not have the insight, know-how, or training to contend, thus becoming caught in a vicious web of unemployment, poverty, and hopelessness.

The cycle of despair continues in that the children of parents on welfare are left with few opportunities to *break away* from the disappointments of the past. When one generation is 'struck by poverty,' generations to follow are likely to face a similar battle. According Diane Crispell (1994) in American Demographics, children in poverty have a high probability of repeating a similar lifestyle to that of their parents. Generating home environments where structure and discipline are not experienced by or expected of children, where the absence of a father or mother in the household is a likely occurrence, and where role models depicting entrepreneurship, steady employment, and career advancement are rare, the consequences to society are crime-ridden urban neighborhoods, community decay, and isolation (Murray, 1984). However, it is argued here that a current priority to initiate *workfare* for those who are unable to find full-time employment in the private sector may be misguided and do more harm than good for households presently part of a safety net in industrialized countries.

Welfare Reform Has A Misguided Direction

The general direction of welfare reform worldwide appears to be quite clear. With European countries in need of increasing worker productivity and economic growth rates, there is an exigency to reduce unemployment and inflation which has a tendency to be a drag on economic expansion. In this regard, consolidating the public safety net is now paramount. In particular, Germany, France, Spain, Italy, and England, among many other, are all considering new policies on welfare management (Finley, 1996). As other emerging countries enter the industrialized marketplace, they too will no doubt have to reconsider welfare policies in their countries. While our focus here is upon the American economy, the parameters of welfare reform included in the model proposed are applicable to other economies. What is required is an innovative viewpoint, an adoption of a new kind of capitalism, and a commitment to the principles of personal choice and freedom.

At the core of most proposals has been an importance attached to getting individuals employed so they can *fend for themselves* and not have to rely upon permanent public financial assistance (Bane & Ellwood, 1995). The issue continues to be how to introduce an element of self-reliance into the welfare reform equation. A related issue has been how to eliminate discriminatory practices currently in place against job seekers coming from neighborhoods where severe poverty exists. As Julius Wilson (1996) of Harvard University recently noted in his book, When Work Disappears: The World of the New Urban Poor, many companies admit that they hesitate to hire heads of households from communities where significant poverty exists because the applicants generally cannot speak fluent English, do not have knowledge of appropriate business etiquette, and are generally considered unreliable.

There remains considerable concern today that setting too high expectations and unrealistic *benchmarks* against which to judge the effectiveness of welfare reform proposals will do more harm than good (Hoffman, 1996). In this regard, the welfare reform law passed just one year ago in the USA is admittedly experimental, but the law appears to be biased against two-parent families. For example, current federal law targets two-parent families assuming it will be easier to get mothers and/or fathers back to work because one adult can care for any children (Wilson, 1997). Therefore, states are expected to have 75 percent of two-parent welfare families working 35 hours a week, with the deadline for such achievement October 1, 1997. On the other hand, states need to enroll only 25 percent of the single-parent families in a 20-hour a week work programs. This law is perhaps misguided in that two-parent families may be on welfare because they are more needy and helpless, not less so. In view of the complexities associated with parents raising children, it appears premature to determine that two adults together ought to necessarily be among the first to fend for themselves. It is argued here that welfare reform would be more workable if two-parent and single-parent families were treated the same.

If two-parent families are unable to find employment after receiving welfare benefits for two years, then states must enroll them in *workfare*, a program that requires welfare recipients to work for non-profit groups. After two years of participating in workfare, these families are targeted to lose all welfare benefits. According to Governor Carper (1997) of the State of Delaware, if welfare reform is going to succeed, more help must be provided *by the private labor market*. According to Carper, it is important for government to work with businesses to make sure they receive qualified applicants. Correspondingly, there must be available daily support services to ensure applicants have day-care, medical care, and job training. This is the basis of the welfare reform model proposed.

Reinventing the Power Community

One of the demands upon countries around the world is to assure their citizens a smooth transition from a military dominated marketplace to one based upon a *peace time* economy where goods and services are produced to build communities rather than to destroy them. As the world goes through this important transformation, new opportunities arise. The downsizing of the military complex in the United States provides one of those timely opportunities for solving one of America's most pressing problems; that being, getting residents off public welfare programs and into the workplace. In this regard, establishing communities in which families can bond through home ownership is critical to the success of any plan to reform welfare. What is proposed here is converting military bases scheduled for closure into self-contained *power communities* where family stability, occupational training, and employment are readily attainable by all residents. A *power community* is a neighborhood where residents agree to take on a personal responsibility (stipulated in a written economic contract) to not only attend job training sessions but also to volunteer for public service (such as day care assistant, a teaching aid, meals on wheels, etc.). The economic contract signed by residents translates into an interdependent community whereby a civic responsibility is elevated in importance. The term *power* infers control over one's destiny, an outcome that relies upon parental involvement in all aspects of a community. Gaining independence from government rules and regulations is significant as residents attempt to determine their own future rather than one directed by others distant from their surroundings.

There is considerable evidence that the downsizing of the military in the United States is inevitable (Morrison, 1997). In this regard, a series of recommendations from the Commission on Base Realignment and Closure (BRAC) suggest that many of the current 500 military bases be closed or downsized. Many of these military communities have established institutions such as schools, libraries, health care clinics, places of worship, and public safety. These facilities are located near urban centers where there are currently *pockets of poverty*. These military bases can be described as *diamonds in the rough*. They can be converted into new self-contained communities, if there is a commitment to do so.

For example, three bases have been identified in The Healing of America (1997) for great potential for creating a pilot power community. *Alameda Naval Air Station* in California is typical of many other military bases. It covers 2,842 aces and has housing, a retail store, a barber shop, a dry cleaner, a food shop, a florist, a bank, a service station, a bakery, a convenience store, auto shop, child care facilities, an elementary school, library, a medical clinic and a dental clinic. It also has a bowling alley, a movie theater, a pool, a gym, a recreation center, tennis course, racquetball course, a fitness club, a baseball diamond, a football field, and even a golf course. Such a base has all the makings of a power community. Similarly, there is *Plattsburgh Air Force Base* in New York. It houses around 11,000 people and consists of about 1,6000 acres. The services that the Plattsburgh base offers a potential community are many. They include a commissary, a retail store, a home day care program, a kindergarten, a preschool, an elementary school, a library, a hospital, a medical clinic, a bowling alley, a recreation center, a skating rink and fitness center among other amenities A third example of a power community ready to happen is the *Glenview Naval Air Station* in Illinois. It consists of over 1,200 acres and can house 3,800 people. The services available at Glenview are ample housing, a youth center, a medical clinic, veterinary services, a fitness center--and even skeet shooting among others. The list goes on and on.

In these instances, since the land is now owned by the Federal government and is public land, the opportunity is available to reallocate these existing resources for a social purpose—that being, giving many families a second opportunity at the American dream. Placing the proper incentives in place for business executives, government officials, and those presently on welfare, true welfare reform may be at hand. The three incentives suggested as part of an innovative model for welfare reform are the inclusion of an economic contract, home ownership, and the redirecting of priorities of capitalism.

The Economic Contract.

A *power community* is based upon commitments that would result from contractual agreements among the participants. In this regard, residents *on a voluntary basis* must initially be accepted through a interview process with members of committees made up of neighborhood residents and business and government officials. Rights and responsibilities would be carefully delineated up front so all parties can perceive the rewards of active participation. The economic compact is with the community and not with one particular company. Residents, retailers, and other commercial entities also must agreed to follow the acceptable practices according to the economic contract. Penalties for non-compliance would be put into place by the local town committees initially, and then by state and federal agencies if necessary.

Items to be included in the contract are educational and training responsibilities, voluntary commitments, worker responsibilities, and default procedures. The important aspect here is to create a diverse community consisting of two-parent families, single-parent families, singles, consumers from varying socio-economic strata, and those from varying cultures. Similarity, a diverse commercial sector can be carefully 'crafted' by community leaders in order to provide alternatives for long-term employment. The essence of the model proposed is to establish a planned community where commitment to the social ideals is on a voluntary basis, where personal choice and freedom is preserved, and where an economic contract sets the standards of practice.

To give stability to families where instability has traditionally been the norm rather than the exception, companies that commit to the ideals of the 'power community' will be requested by means of the economic contract to plan with residents for providing steady employment that is career-oriented rather than through part-time alliances. Therefore, businesses are not only committed to the economic aspects typically found in employment contracts (e.g., wages, fringe benefits, etc.) but also to the economic well-being of the community in which they function. Social responsibility entails a commitment from both the resident and the business executive. The rewards for both are steady employment, lower costs to providing community services, and a reliable workforce. Such economic contracts are required to give structure and discipline to families who in the past have had neither. With such structure built around work, families can organize themselves into functioning units that enable personal choice to become a reality.

The economic contract places commitment as the initial expectation. For those who abide by community expectations, they will reap the rewards which includes home ownership at the conclusion of a specific time period. Uninhibited laissez-faire is not the answer. In a free enterprise system where short term profits rule decision-making, a proposal that does not promise a quick return on investment does not receive much attention. Reclaiming the marketplace and workplace is what this proposal is all about, and those who are interested in taking this country to the next level must accept the realization that new relationships between business and communities may be required if trust and integrity are to re-enter the equation of economic justice.

Home Ownership

To assure that families do not lose interest as the aura of the new community wears off, a strong social bonding becomes the driving force for generating a feeling of security. Ownership of affordable housing is an integral part of creating this social bonding, according to Charles Brittinghman (1997), president of the Delaware Chapter of NAACP. Therefore, in this new kind of community, different kinds of housing for residents can become part of the power neighborhood. As is the case in England and Australia, a supply of low-cost housing can be erected without the need of a large public bureaucracy or public funding (Aspen Institute, 1997). To make housing 'slum proof,' an important aspect of the economic contract signed by landowners would be the requirement that all housing in the neighborhood must be owner-occupied, meaning that landlords must reside in the same dwelling as those tenants from whom they receive rent or mortgage payments. This substitutes the landlord for community police in terms of ensuring that community residences, while they are being rented, remain in good repair. With the homeowner having to be present, there is an automatic built-in quality control factors which preserves both the health and environment of a community.

The incentive for the landlord to participate in this aspect of community development is the expected outcome that property owned will be consistently rented with an eventual probability of selling that dwelling at a reasonable profit. Therefore, there is a 'guaranteed source' of renters and purchasers of dwellings purchased for investment purposes by landlords. Also, accessory apartments could be accepted as a new form of housing for residents who will initially rent their dwellings. The income derived from rents helps owners pay off their own mortgages as well as make home living more affordable. At the same time, it provides for low-cost housing opportunities for those who have historically been prevented from owning their own homes.

In addition, living above stores, sharing parts of residences in the form of common areas, and cluster housing interspersed among small business retailers are all possible alternatives leading to ownership. Since there is a need for venture capitalists to create new forms of housing or convert existing housing units on military bases, financial incentives need to be put in place. In a power community, the expectation is that such investors will have guaranteed buyers after a selected period of time. To support this trend toward home ownership, low-interest mortgage money may be make available through similar strategies such as those developed by *community development corporations* in Chicago, Dallas, and Los Angeles (Aspen Institute, 1997). Reconfiguring a power neighborhood is based upon the principle that residents can create a closeness that fosters trust and understanding. Within this framework, residents will live, work, and play in close proximity to a residence. Using the existing pattern of many military bases, stores, housing, and recreational areas are all connected by sidewalks where access is available by those with or without automobiles. Therefore, most needs of residents may be fulfilled within walking distance of a residence. It is argued that households who have more invested in their neighborhoods are more likely to commit to its ideals.

Redirecting Priorities of Capitalism

The economic contract will also include a redirecting of business priorities, symbolizing a renewed commitment to the citizens of a *power community*. Traditionally, in the American capitalistic system, companies place investors first in meeting their priorities followed by serving their customers and finally accommodating the desires of their employees. The outcome of such priority setting has been an unstable working environment where downsizing, part-time work alliances, and career interruptions are part of work patterns (Branson, 1997). The disruptions to employment are contradictory to what is required in a power community. When profits decrease, investors generally sell their stocks in that company. Business executives then decide to cut costs. They have several options. The may discontinue the product line that is losing money; they may sell the product line to another company; or they may decide to lower the quality of the product to reduce production costs. In either event, very little consideration is given to customer loyalty. Finally, workers realize that they may be forced out of their jobs to cut labor costs. Therefore, the short-term decision making mentality in which investors come first followed by the concerns of customers and employees results in continual disruption to families.

What is argued here is the changing of business priorities to that of placing employees first, customers second, and investors third. This strategy is similar to the one adopted by Richard Branson (1997), CEO and president of the Virgin Group of Companies, in England. Over the past decade, he has built a billion-dollar empire consisting of business ventures into the airline industry, food and beverages, telecommunications, among many others. His management style suggests that employees must have "fun" at their work, and this comes about only when employees feel secure, enjoy what they are doing, and perceive management looking after their best interests. If employees have these strong 'fun-damentals,' then customers will also reap the benefits. He suggests that customers can sense if workers enjoy their work. This often results in better service to the customer, resulting in loyal customers. Loyal customers mean repeated purchases, resulting in higher profits. Higher profits attract investors, generating additional wealth.

Capitalism in a *power community* reflects the integration of a revised set of priorities. The essence of the revised set of priorities is a corresponding reliance upon establishing a small business atmosphere where worker identity is important. Therefore, since those in poverty need to develop pride and self-esteem, the size of businesses to enter the commercial sector of *the power community* must remain small, hiring perhaps no more than 200-500 employees. This is required because of the cyber economy where speed in the decision-making process and the pace of change among consumer attitudes demands businesspersons to adjust marketing strategies quickly to stay competitive. There may be exceptions to the small size in terms of medical facilities and educational institutions, but the generally pattern of employment by the private sector will be small businesses. If larger corporations become part of the commercial mix, it is important that they are organized with a 'small group work mentality' where self-esteem and pride may evolve. This fits into the creation of the *small town environment* where socialization of work, community, and family creates the trust and integrity required to rebuild self-esteem and individual worth.

A Need for a Funding Triad

In order for such power neighborhoods to become a reality, a *funding triad* will be required. One source, of course, is public grants directly from **government**. However, instead of giving financial grants, this could be in the form of *giving land* for the purpose of attracting business to these power communities. However, more creative contractual agreements with business through a variety tax incentives and grants are also possible. There are many incentives for government to become part this triad. One incentive is that local, state, and federal governments will receive additional funds through income taxes when residents are working. The more individuals are working, the more money government receives. A second advantage is that a successful power community means lower costs for public agencies in terms of Medicaid, food stamps, AFDC, supplemental social security, unemployment compensation, and a myriad of other long-term associated welfare programs. Medicaid alone currently costs the Federal government somewhere between $60 and $90 billion, depending upon the determination of direct and indirect expenditures on behalf of those in poverty.

Therefore, the incentive for government is the ability to have people normally outside of the workforce now gainfully employed, resulting in the opportunity for widening the tax base of local communities. Therefore, government would be capable of redirecting money currently applied to Medicaid and other programs to new power neighborhoods, with an end in site as to their commitment. With the closing of large numbers of military bases, part of the $300+ billion defense budget could be reallocated to initiate pilot power communities at several sites, three which have been identified earlier in this proposal.

The second segment to the triad is **business**. Companies can take charge of local schools, if so desired, by putting in place a more responsive educational system to the needs of both residents and employers. Secondly, these businesses will also, if properly selected, be assured a whole new breed of customers which means profits. Thirdly, with reduced operating costs and a steady source of employees, businesses can generate a strong public relations campaign of successfully being part of an experiment that resolve an antagonizing problem—welfare reform. Also, business would be relieved of past excessive burdens associated with federal regulations and new laws placing pressure on them to hire the 'presently' unemployable individuals from today's urban ghettos. Therefore, these indirect costs would be eliminated, allowing them to devote more time to research and development of new and better products to compete internationally. Another area of benefit to business will be reduced medical costs since the essence of these communities is upon physical fitness, heath, and recreation.

The third part of the funding triad is the generation of new wealth by those being assisted off the public welfare. **Those who participate** will eventually pay a variety of taxes to support their local institutions, such as libraries, public parks, etc. Also, the maintenance costs of dwellings will be assumed by the families with the standards set by the neighborhood committees consisting of volunteers. Therefore, the costs to the public related to supporting a power community will gradually diminish. By creating a new stream of volunteers, public services will be re-generated at low cost which is an incentive for neighbors to reap the benefits of their own action. They will be able to perceive that participation has immediate rewards such as better educated children through better schools, more control over their own lives with minimal interference from impersonal government bureaucracies, and an opportunity to purchase their own homes. With families becoming the focal point of all local community policies, the participants will require less assistance and become more self-reliant.

Returning to the Traditions of Capitalism

The welfare reform model proposed focuses upon recreating a spirit of individualism, accomplishment, and productivity within a socialization process where the community has an important function. The healing process of individuals who have traditionally *either* questioned the true meaning of freedom in a democracy or the benefits derived from free enterprise system comes from within based upon active involvement. The healing process unites business, government, and families on welfare in a common effort. The goal is to embrace what is great about capitalism; that being, an economic and social bonding based upon work, home ownership and pride. The result is the balancing of the needs of individuals with those of society by creating an atmosphere of trust.

These power neighborhoods will not come about easily. The reallocation of public resources, a serious commitment on part of the business community to reform welfare, and a willingness to experiment with new kinds of standards and expectations are all required. While initial funding for redesigning power neighborhoods from military bases will be initially substantial, the willingness to take a risk and strive for a totally new approach to society building may result in a new beginning for many families caught in a vicious cycle of unemployment and despair. However, taking risk is what capitalism is all about! Without boldness, would we have electricity, jet airliners, telephones, ATM machines or computers! While all these experiments resulted in real advancement in the standard of living of many citizens on the world, each inventor had his doubts. Now may be the time to being a new venture that no doubt will shock some but to others may provide a second opportunity to enhance their standard of living of those in need of a second chance.

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Endnote

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Are you Able and Willing to Borrow?

Approximately 19% of American households are not able to borrow. Seventy percent of American households are willing to borrow. Only 55% of all households behave as households who are able and willing to borrow. About 26% of all households are able but not willing to borrow. 15% are willing but not able to borrow, and 4% are not able and not willing to borrow. The findings are important for policy makers, educators, economists, and lenders.

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Introduction

After economists explored the effect of liquidity constraints on household consumption, the relationship between liquidity constraints and household debt became a concern. Early findings suggested that the effect of liquidity constraints on households debt is much larger than on household consumption. Households will incur much more debt if borrowing constraints are removed (Cox and Jappelli, 1993; Duca and Rosenthal, 1993).

Liquidity constraints affect the supply side of consumer debt. It is inappropriate to assume that the credit market is in an equilibrium condition where credit supply equals credit demand given a fixed interest rate if liquidity constraints exist. In other words, for those households who are credit constrained, credit supply has an upper bound (Avery, 1981).

Since credit market equilibrium is determined by demand and supply of credit, borrowing behavior is the product of distinct decisions systematically made by both borrowers and lenders. The existence of liquidity constraints creates disequilibrium in the supply side of the credit market. By the same token, households may choose not to incur as much credit as they would be allowed. That is, a household's willingness to borrow affects its demand for credit. Neglecting households' ability to borrow or willingness to borrow will lead to biased estimations of a household's borrowing behavior. It is necessary to integrate a household's ability to borrow with their willingness to borrow to have a clear and complete picture of household borrowing behavior.

Accordingly, it is argued here that due to credit market imperfection and preference differences, researchers should segment households to study their borrowing behaviors based on their ability to borrow and willingness to borrow. Since this essentially empirical issue has not yet been addressed, it is important to begin at a descriptive level. The purpose of this study is to investigate characteristics of households based on their borrowing behavior. Descriptive statistics will be used to compare the economic and socio-demographic characteristics of households by ability to borrow, by willingness to borrow, and by the two-way split on willingness and ability to borrow. The four possible subsets include households who are able and willing to borrow, households who are able but not willing to borrow, households who are not able but willing to borrow, and households who are not able and not willing to borrow.

Review of Literature

Approximately 20% of the U.S. population is credit constrained (Hayashi, 1985; Jappelli, 1990; Jappelli & Pagano, 1989; Mariger, 1987). Only 80% of household consumption is consistent with the pure life-cycle permanent income hypothesis (Hall & Mishkin, 1982). The existence of liquidity constraints reduces household consumption to about 5.5% below the desired level (Hayashi, 1985).

Using the 1983 Survey of Consumer Finances (SCF), Cox and Jappelli (1993) estimated levels of a household's total desired debt conditional on holding debt and not being credit constrained. They found the desired debt level of liquidity-constrained households was 75% higher than their observed debt. They found that aggregate household debt holdings would be raised 9% if liquidity constraints were relaxed.

Duca and Rosenthal (1993) explored the effect of borrowing constraints on consumer debt. Using the same data as Cox and Jappelli (1993) but focusing on households with heads under age 35, their findings were generally consistent. These data suggest that many young households are credit constrained, and that nonwhite households account for a disproportionate share of such families (Duca & Rosenthal, 1993, p.87).

The literature on consumer willingness to borrow is still in its infancy. However, several studies have incorporated consumers' attitudes toward credit use as an indicator of their willingness to borrow. More specific measures of attitudes toward installment debt has been used successfully to indicate household attitudes toward borrowing (Hendricks et al., 1973). Ajzen and Fishbein (1980) emphasized that general attitudes toward behavior were not enough to predict actual behavior. More specific attitudes were needed in order to predict behavior.

Using a more general measurement of attitudes toward installment debt found in the 1989 Survey of Consumer Finances, Yieh (1996) found that approximately 35% of the U.S. population had a negative attitude toward incurring installment debt. Households' attitude toward borrowing was as important as households' inability to borrow in explaining disequilibrium in the credit market.

Methods

The sample for this study was from the 1989 Survey of Consumer Finances (SCF). The final sample contains 3,107 out of the original 3,143 observations of the 1989 SCF.

Identifying Which Households are Able to Borrow and Which are Not

Jappelli's (1990) method is used in this study to identify households who are able to borrow and households who are not. A household who answered "yes" to either of the following questions is defined to be not able to borrow: In the past five years, has a particular lender or creditor turned down any request you (or your husband/wife) made for credit, or not given you as much credit as you applied for?" or as there any time in the past few years that you (or your husband/wife) thought of applying for credit at a particular place but changed your mind because you thought you might be turned down?" A household who answered "no" to both questions is defined as being able to borrow, and therefore not credit constrained.

Identifying Which Households are Willing to Borrow and Which are Not

Two major questions are used by the SCF to ascertain consumers' attitude toward credit. The first question is in general. The second question which is more specific. The specific question used by Hendricks et al. (1973) is applied in this study to define household willingness to borrow. The question was:

> People have many different reasons for borrowing money which they pay back over a period of time. For each of the reasons I read, please tell me whether you feel it is all right for someone like yourself to borrow money ...
> first, to cover the expenses of a vacation trip?
> next, to cover living expenses when income is cut?
> (next,) to finance the purchase of a fur coat or jewelry?
> (next,) to finance the purchase of a car?
> finally, to finance educational expenses?"

Respondents could answer either "yes" or "no" to each question.

It is believed that households that borrow money to finance the purchase of a fur coat or jewelry and households that borrow money to finance educational expenses would have different levels of willingness to borrow (Duca & Rosenthal, 1993). Principle component analysis is used in this study to provide a weight for each question.

The willingness index of individuals is between -1.70351 to 2.495696. The mean of the index is zero and the median is 0.059663. As principle components is a multivariate technique for detecting linear relationship among variables (SAS Institute Inc., 1989), the negative index of willingness means there is an overall negative loading on these five questions. Hence, households who have a negative willingness index are defined as households who are not willing to borrow and households with a positive willingness index are defined as households who are willing to borrow.

Results

Table 1 shows the analysis of selected variables on the dichotomization of the sample into 1) households who are able to borrow, households who are not able to borrow; and 2) households who are willing to borrow, and households who are not willing to borrow.

Consistent with previous studies (Hayashi, 1985; Jappelli, 1990; Jappelli & Pagano, 1989; Mariger, 1987), about 19 percent of all households are credit constrained. Households who are able to borrow are much older than households who are not able. Compared to credit constrained households, households who are able to borrow have

109

fewer children and have worked more years for their current employer. They also have higher levels of current income, net worth, and total debt than constrained households. However, they have lower estimated permanent income[2] than their counterparts. About 11% of able-to-borrow households are black while 21% of credit constrained households are black. Sixty-three percent of able-to-borrow households own a house but only 38% of constrained households are homeowners. The percentage of constrained households having a bad credit history is five times greater than for unconstrained households.

Table 1
Analysis for Able-to-Borrow Households Versus Not-Able-to Borrow Households; Willing-to-Borrow Households Versus Not-Willing-to-Borrow Households

Variables	**Able to Borrow**	**Not Able to Borrow**	**Willing to Borrow**	**Not Willing to Borrow**
Sample Size	2,519	588	2,169	938
Age	50.9	38.3	44.4	56.9
Children	0.8	1.2	1.0	0.7
Workyear	6.8	4.8	-	-
Income ($)	40,349	32,000	41,038	31,494
Permanent Income($)	40,709	48,229	50,281	22,461
Net Worth ($)	1,055,202	198,903	896,912	735,896
Total Debt ($)	32,120	30,143	36,056	20,315
Gender of Head				
Male	72.1%	70.0%	74.2%	64.7%
Female	27.9%	30.0%	25.8%	35.3%
Race				
Black	10.5%	20.9%	11.5%	16.7%
Non-black	89.5%	79.1%	88.5%	83.3%
Marital Status				
Married	56.3%	50.4%	57.5%	48.1%
Non-married	43.7%	49.6%	42.5%	51.9%
Employment				
Unemployed	35.2%	21.0%	21.8%	57.4%
Employed	64.8%	79.0%	78.2%	42.6%
Education				
Less	25.1%	21.9%	17.6%	41.5%
High School	31.2%	35.0%	34.4%	26.3%
More	43.7%	43.1%	48.0%	32.1%
Homeownership				
Yes	62.8%	37.6%	-	-
No	37.2%	62.4%		
Bad Credit History				
Yes	2.6%	13.1%	-	-
No	97.4%	86.9%		
Interest Rate				
Lower			9.4%	14.7%
Same	-	-	31.0%	31.8%
Higher			59.5%	53.5%
Not Risk Taking				
Yes	-	-	43.7%	65.8%
No			56.3%	34.2%

Approximately 70% of all households are willing to borrow; 30% are not. Households who are willing to borrow are younger and have higher levels of current income, permanent income, net worth, and total debt. About 74% of willing-to-borrow household heads are male and 58% are married. These percentages are somewhat higher than those of households who are not willing to borrow.

More of the willing-to-borrow households have higher education levels than households who are not willing to borrow. About 44% of willing-to-borrow households are not willing to take any financial risk, while 66% of not-willing-to-borrow households are also not willing to take any financial risks.

Table 2 presents the means and distributions of selected variables for the four possible groups under a two-way split of the population on the dimensions of ability and willingness to borrow. Only 55% of all households will behave as households who are able and willing to borrow. About 26% of all households are able but not willing to borrow, 15% are willing but not able to borrow, and 4% are not able and not willing to borrow.

Table 2

Means and Distributions of Selected Variables for Four Possible Subgroups of Households Under a Two-way Split on the Ability and Willingness to Borrow Dimensions

Variables	**Able and Willing to Borrow**	**Able but not Willing to Borrow**	**Willing but not Able to Borrow**	**Not Able and not Willing to Borrow**
Sample Size	1,700	819	469	119
Age	47.0	59.8	37.0	43.4
Children	0.9	0.6	1.2	1.1
Workyear	7.9	4.3	4.6	5.7
Income ($)	43,718	32,616	33,505	26,140
Permanent Income ($)	50,000	19,378	51,071	37,161
Net Worth ($)	1,150,290	836,901	184,688	254,264
Total Debt ($)	37,775	19,137	31,224	25,932
Gender of Head				
Male	74.9%	65.5%	72.3%	61.0%
Female	25.1%	34.5%	27.7%	39.0%
Race				
Black	8.9%	14.2%	18.9%	28.6%
Non-black	91.1%	85.8%	81.1%	71.4%
Marital Status				
Married	59.8%	48.2%	51.1%	47.6%
Non-married	40.2%	51.8%	48.9%	52.4%
Employment				
Unemployed	23.3%	62.5%	17.8%	33.4%
Non-unemployed	76.7%	37.5%	82.2%	66.6%
Education				
Less	17.0%	43.6%	19.4%	31.5%
High School	34.0%	24.8%	35.4%	33.6%
More	49.0%	31.6%	45.2%	34.9%
Homeownership				
Yes	64.6%	58.5%	37.0%	39.8%
No	35.4%	41.5%	63.0%	60.2%
Interest Rate				
Lower	10.4%	14.3%	6.9%	16.9%
Same	33.8%	32.8%	23.3%	26.9%
Higher	55.8%	52.9%	69.8%	56.2%
Not Risk Taking				
Yes	42.6%	66.0%	46.6%	64.5%
No	57.4%	34.0%	53.4%	35.5%
Bad Credit History				
Yes	2.6%	2.6%	12.6%	15.1%
No	97.4%	97.4%	87.4%	84.9%

Households who are able and willing to borrow have the longest number of years working in their current employment, current income, net worth, and total debt. Seventy-five percent of household heads who are able and willing to borrow are male-headed, 60% are married, 49% have more than a high school diploma, and 65% are homeowners. These percentages are higher than those for the other three groups.

Households who are able but not willing to borrow are the oldest group. They have the fewest number of children living at home, years with current employer, and lowest permanent incomes. Households who are able but not willing to borrow have the highest level of unemployment. Sixty-six percentage of these households are not willing to take any financial risks. This percentage is much higher than the other three types of households.

Households who are willing but not able to borrow are the youngest. They have more children and higher permanent incomes than the other three groups. Their net worth is much less than their counterparts. Households who are willing but not able to borrow have the lowest levels of unemployment and homeownership.

Households who are not able and not willing to borrow have the lowest levels of current income. Noticeably, they are not the households who have the lowest levels of total debt. Households who have the lowest level of total debt are households who are able but not willing to borrow. Twenty-nine percent of households who are not able and not willing to borrow are black and 15 percent of them have a bad credit record. These percentages are much higher than those of the other categories of households.

Conclusions and Implications

Households who are able to borrow have more total debt than households who are not able to borrow. The total debt of households who are willing to borrow is more than that of households who are not willing to borrow.

Notably, households who are not able and not willing to borrow have the lowest levels of current income but highest records of bad credit. This group includes more female-headed households, more black households, and more single households than the other three groups. They also have more children (although not as many as the households who are willing but not able to borrow). Putting all these characteristics together, households who are not able and not willing to borrow are more likely to be those households who are black single-mother households, have low incomes, and have problems repaying their existing debts. Households who are not able and not willing to borrow may be the most vulnerable of the group in terms of financial status.

The findings from this study imply that about 15% of U.S. households are potential customers of pawnbrokers and loan sharks. Pawnshops and loan sharks fill the void left by the absence of legitimate lenders as long as these households exist. How to reduce the number of households who belong to this group? How to regulate pawnshops (Caskey, 1991)? How to meet households' desired debt levels and reduce the profitability of loan sharking (Durkin, 1977; Seidl, 1970)? These are important questions for policy makers and economists.

Properly used credit can generate benefits to raise household standards of living (Chandler & Ewert, 1976). These findings suggest households who are not able and not willing to borrow are the most vulnerable group in U.S. society. Credit constraints reduce their potential for using debt as does their unwillingness to borrow. How to improve their ability to borrow and change their attitudes toward borrowing? Policy makers, educators, lenders, and householders need to work on a solution together. However, before households borrow up to their desired debt levels, an urgent concern may be how to maintain the economic well-being of households who are not able and not willing to borrow.

Finally, this study sheds light only on our understanding about the differences of economic and socio-demographic characteristics between households who have different types of borrowing behavior. The importance of incorporating a household's ability and willingness to borrow in a model to investigate household borrowing behavior must be emphasized in future studies. The combined effect of ability and willingness to borrow on household debt should be examined in order to enhance our understanding of household borrowing behavior.

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Endnotes

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2. The construction of permanent income follows the methods of King and Dicks-Mireaux (1981) and Cox and Jappelli (1993). The estimation of the permament income is available upon request.

Do Households Make Saving and Investment Decisions Together?

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How much should a household save? The typical financial planning approach uses some assumed rate of return and some savings goals such as retirement, and calculates the amount needed to be saved each year to reach the goals. However, if a higher rate of return is assumed, the needed percent of income to save will be lower. For example, if a 2% real rate of return is assumed for a 25 year old who will have a constant real salary until retirement, then have a pension equal to 30% of salary, and wants a total retirement income equal to 90% of aftertax salary, then, ignoring tax issues, the worker's savings rate should equal 13% of his or her salary. However, if the worker chose a stock portfolio that could be expected to have a 6% real rate of return, the worker would only need to save 5% of his or her salary. Samuelson (1969) formulated and solved a many-period lifetime model of consumption and investment decisions based on the idea that investors should consider saving-consumption and investment decisions at the same time. In Samuelson's model, investors were assumed to have a certain amount of initial asset which they invested to finance their lifetime consumption; investors had intertemporally additive concave utility functions and faced a financial market with one safe asset and one risky asset. Based on those assumptions, Samuelson derived the optimal rules for saving-consumption and portfolio allocation for a variety of probability distributions. Generally, the optimal saving-consumption level and the portfolio allocation will depend on each other. However, for the constant relative risk aversion utility function, the consumption-saving decision depended on the investment decision, but the investment decision was independent on the consumption-saving decision. However, if the investor's risk preference depends on the level of wealth, such as with the constant absolute risk aversion utility function, then the optimal saving decision will interact with the investment decision.

Merton (1969) used a model similar to Samuelson's discrete-time model to examine the combined problem of the optimal portfolio allocation and the optimal saving-consumption level for an individual in a continuous-time model. With similar assumptions, Merton also derived the optimal rules for household consumption and portfolio allocation. The results were in general comparable with Samuelson's findings. Hakansson (1970) showed that the optimal consumption for any period was a linear increasing function of wealth, and the optimal portfolio allocation in different assets depends only on the consumer's one-period utility function and one-period returns of different assets. Merton (1971) furthered his study on the optimal rules for saving-consumption and portfolio allocation by incorporating more general utility functions, price behavior assumptions, and income from non-capital gain sources. Merton showed that the optimal rules of consumption and portfolio allocation depended on each other (Merton, 1971). Purvis (1978), Smith (1978), and Owen (1981) also successfully presented models that jointly determine saving-consumption and portfolio allocation decisions. To summarize these studies, the portfolio allocation decision in general affects the optimal saving-consumption decision. The saving-consumption decision affects the optimal portfolio allocation, if the consumer's relative risk aversion depends on the level of wealth.

Much effort has been devoted to model these two decisions in one framework. However, few empirical analyses have been done on how those two decisions interact. The lack of empirical testing of these models might be due to the fact that most of the models that consider the saving-consumption and the portfolio allocation decision at the same time are too complicated to be employed in empirical analysis. To test such complicated models, a huge amount of information needed. This study investigates the empirical relationship between saving-consumption and portfolio allocation decisions. The 1995 Survey of Consumer Finances (SCF) cross-sectional survey dataset is used to investigate the relationship between household saving-consumption and portfolio allocation and evidence of response in saving and investment behavior to changes in expectations of the financial markets.

Data and Methodology

The data used in this study are from the public use tape of the 1995 Survey of Consumer Finances (SCF) cross-section data. The 1995 SCF gathered detailed household level information on the composition of assets and liabilities of 4,299 households. It is difficult to assess the investment preferences of households with low levels of financial assets, since they usually do not have anything left for investment other than liquid assets to cover normal transactions during one month. Therefore, households with financial assets equal to or less than one month's income were excluded from the sample used in this study. Retired households were also excluded from the sample, because household saving and portfolio behavior are quite different between retired households and households containing at least one employed person. After imposing the above two criteria, a total of 1,856 households were used in the empirical analysis. The households in the sample represent about 68% of all American households. Because the SCF sample is not an equal-probability sample, data used in this study were weighted to obtain more precise information about the average U.S. household. The Federal Reserve Board used multiple imputation to replace missing values in the 1995 SCF, and the public dataset contains five replicates. The descriptive results reported in this research were obtained by combining results from the five implicates based on Bayesian theory (Rubin, 1987). The Probit and Tobit results reported in the next section were performed on the first implicate.

The empirical model specification and estimation depend on the relationship between the household saving and portfolio allocation decisions, that is, whether the two decisions are independent or interdependent. With the constant relative risk aversion assumption, the portfolio decision could be estimated without considering the saving variable and the saving equation could be estimated by viewing the portfolio decision as one of the endogenous factors. However, empirical studies have yielded limited support for the constant relative risk aversion assumption (Cohn, Lewellen, Lease, & Scharbaum, 1975; Siegel & Hoban, 1982). There is no guarantee that the constant relative risk aversion assumption is valid. The empirical model presented in this study assumes that households make the saving decision and the portfolio allocation decision simultaneously. The estimating equation for the saving and portfolio allocation decisions are:

$$S^*_i = \beta_0 + \sum_{k=1}^{K} \beta_k X_{ki} + \sum_{m=K+1}^{K+M} \beta_m X_{mi} + \beta_R R^*_i + e_{s,i}$$

$$R^*_i = \beta_0 + \sum_{k=1}^{K} \beta_k X_{ki} + \sum_{n=K+M+1}^{K+M+N} \beta_n X_{ni} + \beta_S S^*_i + e_{r,i}$$

Variable S^*_1 and R^*_1 represent the optimal saving decision and portfolio allocation decision of the ith household, respectively. X_{ki} is the value of the kth explanatory variable that affects both the household saving and the portfolio allocation decision. X_{mi} is the value of the mth explanatory variable that only affects the household saving decision, not the portfolio allocation decision. X_{ni} is the value of the nth explanatory variable that only affects the portfolio allocation decision, but not the saving decision. The β terms are response coefficients and $e_{s,i}$ and $e_{r,i}$ are stochastic terms. Since the two decisions are assumed to be determined jointly, S^*_1 is an explanatory variable in the portfolio allocation equation and R^*_1 is an explanatory variable in the saving equation. The two equations should be estimated simultaneously.

Dependent Variables

Savings. The 1995 SCF asked a set of questions regarding household's saving in the previous year. Respondents were asked the following question:

"Over the past year, would you say that (your/your family's) spending exceeded (your/your family's) income, that it was about the same as your income, or that you spend less than your income? (Spending should not include any investment you have made.)"

In this study, saving was coded as a binary variable based on the question stated above. The variable was defined as 1 if the respondent reported that income was greater than spending (excluding spending on investments and durables), zero otherwise. Therefore, instead of estimating the real dollar amount of saving or dissaving, the saving equation estimates the probability of saving money over the past year.

Portfolio Allocation. In this study, household non-housing assets were divided into two categories -- risky and non-risky assets, based on the assets' exposure to risk. Risky assets include directly held stocks, risky assets in IRAs and pension accounts, directly held mutual funds (excluding money market mutual funds), directly held bonds, managed assets (including trusts, annuities and managed investment accounts), saving bonds, other financial assets, investments in real estate, business assets, and other non-financial assets. Non-risky assets include checking accounts, saving accounts, money market accounts, cash value of whole life insurance, and non-risky assets in IRAs and pension accounts. The proportion of the non-housing assets being invested in risky assets was defined as the measure of portfolio allocation. This proportion can range from zero to one.

Independent Variables

Variables Associated With Both the Saving Decision and Portfolio Allocation Decision: Household social-demographic variables include respondent's age and age squared, Years till retirement, household size, Highest educational attainment among spouses, Number of earners, Race and Ethnicity, Health condition of both spouses, Occupation, and Full-time. Age and Age squared were measured as the reported years of age of the respondent at the time of interview. The number of years till retirement was coded as the actual number of years until the respondent expected to retire from the labor force. For those who reported they did not expect to stop working, the retirement age was assumed to be 70. Household size was coded as the actual number of persons in the household. Education was measured by the highest educational attainment of the respondent or his/her spouse, and coded as three dummy variables: College, High School, and Non-high school. Number of earners was coded as the actual number of persons working for pay. Marital status was coded as 1 if the respondent was married and 0 otherwise. Respondents' race and ethnicity was coded into four dummy variables: White, Black, Hispanic, and other races. Health condition was coded as 1 if either spouse reported a poor health condition and 0 otherwise. Occupation was coded into eight dummy variables to indicate the occupation of the respondent. The eight dummy variables are Self-employed, Manager, Technician, Service, Craftsman, Laborer, operatives workers, and Farmer. Full-time was coded as 1 if the respondent worked more than 35 hours a week and 0 otherwise.

Household financial status variables include Total household net worth, Insolvency, Pension income after retirement, and home ownership. Total household net worth is the value of financial assets plus non-financial assets less the total debts. Insolvency was coded as 1 if the household was insolvent (negative net worth) and 0 otherwise. The Pension income after retirement variable was coded as 1 if the respondent expected to have the pension to maintain living standards; 0 otherwise. Home ownership was coded as 1 if the respondent was a home owner; 0 otherwise.

Expectation and attitudinal variables include Expectation about the general economy, Expectation about future family income, Expectation about interest rate, and Attitude towards credit. Expectation about the general economy was coded as 1 if the respondent expected the U.S. economy to perform better; 0 otherwise. Expectation about future family income was coded as 1 if the respondent expected total family income to go up more; 0 otherwise. Expectation about interest rate was coded as 1 if the respondent expected the interest rate to be higher, 0 otherwise. Attitude towards credit was coded into three dummy variables to indicate whether the respondent felt buying things on credit was a good idea, a bad idea, or good in some ways and bad in others.

Wealth transfer variables include Expected inheritance, Received inheritance, and Attitude towards bequest. Expected inheritance was coded as 1 if the response is yes and 0 otherwise. Received inheritance was coded as 1 if the response is yes and 0 otherwise. Attitude towards bequest was coded as 1 if the respondent thought was important and 0 otherwise.

Saving motives variables were based on respondent responses about their reasons for saving. These questions recorded more than 20 reasons ranging from education to funeral expenses. These 20 reasons were separated into 5 groups: retirement, education, emergency, durables, and others. Five dummy variables were created and the two most important saving goals listed by the respondent were coded.

Variables Only Associated With the Saving Decision. Household current income was coded as a continuous variable. Transitory variation in current income was categorized by three dummy variables indicating if the total household income in the past year was unusually high or low compared to what the household would expect in a "normal" year, or it was the same.

Variables Only Associated with Portfolio Allocation. The investment horizon variable was created based on two questions regarding the most and least important time periods in terms of household financial planning. Investment horizon was defined as the weighted average of the two time periods. The most important planning period was assigned a weight of 5 and the least important Period was assigned a weight of one. The risk tolerance variables were created based on the household's response to a question regarding the respondent's attitude toward risk. Three dummy variables were created to indicate the four levels of financial risk the respondent is willing to take to earn investment return.

Analysis

The error terms in the two equations may be correlated, so single equation estimation ignoring the joint endogeneity of the decisions may produce biased estimates of the parameters. Since the saving and portfolio allocation decisions are assumed to be determined jointly, the two equations must be estimated at the same time to correctly address the simultaneity problem. The simultaneous equation system can be estimated as suggested by Maddala (1983, pp. 246). This model differs from the usual simultaneous equation system in that the dependent variable in the first equation is binary and the dependent variable in the second equation is censored (see Chen, 1997). This model can be estimated by maximizing the likelihood function of a structural two stage Probit-Tobit model. The two stages of the estimation procedure provided by Maddala (1983) are presented as follows. In stage one, the reduced form of the saving and portfolio allocation equations are estimated by the Probit and Tobit methods, respectively. In stage two, S_i and R_i on the right hand sides of the two equations are replaced with the predicted values S_i^{**} and R_i^{**}, from stage one. The two new equations are estimated by Probit and Tobit, respectively to obtain unbiased and consistent estimates of the joint model.

Results

Demographic Characteristics

There were 1,147 households in the entire sample reporting saving and 709 reporting dissaving in 1994. The weighted proportion of households reported savings was 54%.

Probit and Tobit Results

The results of the second stage of the two-stage Probit and Tobit for the determinants of household savings and portfolio allocations can be seen in the full version of this paper on the web (Chen, Hanna, & Montalto, 1998). Since the estimated coefficients of Probit and Tobit analysis can not be interpreted directly, marginal effects for each independent variable were calculated and reported. According to the Probit and Tobit results, there is no significant endogenous relationship between the household saving decision and the portfolio allocation decision. This suggests the assumption that households are making saving and portfolio allocation decisions simultaneously might not be valid.

Determinants of Household Saving

The Probit regression results in this study suggest that respondent age, marital status, household size, race and ethnicity, current net worth level, expected pension adequacy, future inheritance, saving motives, occupation and current household income are significant factors that affect the probability of saving. The relationship between age and the probability of saving is found to be non-linear. The probability of saving decreases as the age increases before age 44. After age 44, the probability of saving starts to increase. Married couple households are more likely to save, others things being equal. One plausible explanation is that married couples are more forward looking than others. They might be more motivated by future consumption needs which will drive them to save more. Household size is negatively related to household savings. Households with more family members would need to spend more to keep the same living standard. Home owners are more likely to save, while people who expect to have adequate pension income after retirement are less likely to save. This makes intuitive sense. Households with adequate pension income after retirement do not need to save as much as others to finance their consumption after retirement. Households with clearly defined saving goals are more likely to save. The results also indicate that saving tends to move in the same direction as current household income. Respondent's occupation, expectation on future economy, and attitude toward credit were not found to be significantly related to household savings. The predicted proportion of risky asset holding is not significantly related to the household saving decision when it is treated as an endogenous variable.

Determinants of Household Portfolio Allocation

The Tobit regression results indicate that age, self-employed status, and willingness to take above average financial risk are significantly related to proportion of risky asset holding. The relationship between age and the proportion of risky asset holdings is found to be non-linear. The proportion of risky asset holdings increases as the age increases, however, the marginal effect decreases. Self-employed people tend to invest more in risky assets. One plausible explanation for the positive effect is that self-employed people are more likely to invest their savings into their own business than others. Households' willingness to take financial risk is positively related with the holdings of risky assets. Household portfolio allocation tends to move in the same direction as their risk preferences, other things being equal. The predicted probability of saving is not significantly related to the proportion of risky asset holding when it is treated as an endogenous variable.

Discussion and Conclusion

By controlling for the differences in household socio-demographic characteristics, financial status, and other factors, the relationship of household saving and portfolio allocation is investigated. No evidence of endogenity between household saving and portfolio allocation was discovered. Neither the estimated coefficients, nor the likelihood ratio tests indicate that households make saving-consumption and the portfolio allocation decisions simultaneously. This implies that households do not seem to make saving-consumption and portfolio allocation decisions at the same time. However, it is possible that the endogenous relationship was not discovered by the empirical analysis due to data limitations, model mis-specifications, and variable measurement errors. Because both dependent variables are not perfectly measured, especially the saving variable, household saving and investment decisions might not be captured accurately. Similar suspicion could be raised with respect to many independent variables too. It is also possible that some important factors that could have considerable impact on household financial decision making are not included in the empirical analysis, although efforts were made to try to incorporate the most relevant variables.

The results of this study contribute to the literature in two ways. First, this study explored the relationship of household saving and portfolio allocation decisions. Empirical results do not support the endogenity of household saving and portfolio decisions. Secondly, this study also found that many household characteristics and financial factors affect household saving and portfolio allocation. These findings should be of great importance in terms of understanding household financial decision-making. The results of this study have very important implications for financial planning, consumer education, and public policy.

Optimally, households should consider their saving decision and portfolio allocation decision simultaneously. However, the empirical results of this study do not find any endogenous relationship between these two decisions. This could be due to the fact that the cost of finding the optimal solution for both saving and investment could be very high for individual households. Because of the complexity and the increasing marginal computational cost to find the optimal solution, households might not necessarily pursue the optimal solution. In other words, the computational cost prevents people from getting the best solution (Shefrin & Thaler,1988; Browning & Lusardi, 1996). Consequently, households are not using their resources optimally, although it is theoretically possible to do so. A consumer education program might be the best strategy to help household choose optimal saving and portfolio allocation decisions. The program can be designed based on this study and previous literature. A well-developed computer expert system could be one way to implement such a strategy.

This study is subject to several limitations. The 1995 SCF is the most comprehensive survey on American households financial information. However, several important components of household saving and portfolio allocation are not included in the survey questions. For example, the exact saving amount is not available because no consumption information is included in the survey. The sample used in this study represents about two thirds of total American households. The results presented in this study should be interpreted with caution, since they might not hold for the entire population of American households or other sub-groups. Future studies on all American households would provide more insights. A simultaneous equation model is required in order to investigate the possible endogenous relationship between household saving and portfolio allocation. However, none of the statistical packages could perform a simultaneous equation model with one binary and one censored dependent variable. A structural two-stage Probit and Tobit procedure was used as a compromise. Therefore, advanced statistical tools would help to deal with this limitation. This limitation could also be solved by having a continuous measure of household saving in a dataset with good portfolio information.

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Consumer Interests Annual *Volume 44, 1998*

The Price of Time for Informal Female Caregivers of the Elderly: A Comparison of Two Methodologies

This study utilizes the 1992 wave of the Panel Study of Income Dynamics (PSID) to estimate the price of time for informal caregivers of elders who co-reside with adult children. It estimates both a reservation and imputed wage. Based on the theory of household production and the empirical results, the reservation wage appears to be a more accurate measure of time spent in caregiving.

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Introduction

Care for elders in their oldest years tends to be extremely time consuming, exhausting, and expensive. Informal care, which is any care that is provided to an elder without an explicit monetary cost, comprises a large proportion of the care for elders who live at home. Providers of informal care usually include peer friends, and relatives who are most often children, more specifically daughters. The costs to these caregivers can be very substantial emotionally, socially, physically, and financially. The objective of this study is to quantify the cost of informal caregiving for unemployed, married, female caregivers. Two methods are used to estimate a wage rate for caregivers. The first calculates an *imputed market wage* based on their market wage determining characteristics. The second calculates a *reservation wage rate*, a measure of the price of the time spent in household production.

Related Literature

The opportunity costs related to informal care can often be very significant. Miller (1981) has coined the term 'sandwich generation' for the generation of adult child caregivers who are sandwiched between their aging parents and their own maturing children. These caregivers, named as the major resource and support group for the elderly, face competing role demands. Informal caregivers of the elderly are often not employed in the labor market as a result of caregiving responsibilities. Stone and Short (1990) found that 49.5% of child caregivers were not employed in the labor market while 25.2% were employed with some type of accommodation. Of employed caregivers, 30% had reported quitting their jobs or reducing hours of work in order to care for someone (Stone, Cafferata, and Sangl, 1987). In studies of time allocation of caregivers, it is found that caregiving significantly affects hours of market work (Ettner, 1995a, 1995b; Stone and Short, 1990).

Research on informal caregivers of the elderly finds that females, more specifically, adult daughters comprise the majority of primary informal caregivers in the U.S. (Brakman, 1994; Konrad and Lommerud, 1995; Finley, 1989; Dwyer, Folts, and Rosenberg, 1994; Lee, Dwyer, and Coward, 1993; Stone et al., 1987). Stone et al. (1987) found in a nationwide survey of informal caregivers that more daughters than sons reported work conflicts, working fewer hours, rearranged schedules, and took time off without pay as a result of caregiving responsibilities.

Conceptual Model

The methods used here to estimate the imputed market wage and reservation wage rate are based on the theories of labor supply and household production (Becker, 1965). A household derives utility from goods and services purchased in the market, commodities produced in the household and leisure time. The 'amount' of utility that a household can enjoy is constrained by the household's resources available to them in the observed time period, measured by the household's budget constraint. The household production function measures the productivity of an individual's time spent in household work. It's value is termed the reservation wage rate. In addition to household production, an individual can engage in market work. The imputed market wage is the slope of the market work budget line. This wage is what could be earned by an individual if s/he entered to the market to work. The slope of the market work budget line where it lies beneath the household production must be imputed since a real wage rate is not observed. The imputed market wage and the reservation wage rate have been used to estimate the value of time for unemployed persons (Abdel-Ghany and Sharpe, 1996; Duncan, 1996; Heckman, 1974; Kidd, 1993; Wang, 1994; Zick and Bryant, 1983, 1990).

Data

The 1992 wave of the Panel Study of Income Dynamics (PSID) is used to estimate and compare the imputed and reservation wage rates of married female caregivers of elders. The PSID contains detailed economic information, and the 1992 wave provides extensive information on the health status of elders. These measures of health serve as a proxy for informal caregiving in the household (see, Ettner, 1995a, 1995b; Wolf and Soldo, 1994).

It was important to identify households that were coresiding in both 1991 and 1992 that had not experienced any change in its coresidence status. Since information was needed on working caregivers for the model, caregiver age was restricted to between 18 and 64. Using these guidelines, the sample included married couple households with at least one elder living in the household in both 1991 and 1992, providing an unweighted sample size of 185 households. Variables included in the analyses are the caregiver's and the elder's demographic characteristics, including gender, age, education, and health. Age of the youngest child is interacted with a dummy variable for the presence of dependent children to control for households with no dependent children. Work experience is measured by the number of years the caregiver has worked full-time for at least six months in the past ten years. Health of the elder is measured by the number of difficulties with ADLs or IADLs. Household characteristics including the number of rooms in the home, a dummy variable for household health (indicating that at least one household member besides the elder has a health condition), and a dummy variable indicating adequate living space as reported by the household head, as well as regional characteristics are also included in the analyses. Since the data are nationally representative, regional characteristics are included to control for differences in unemployment rates and wages that exist across the country. The sample is weighted to make it representative of households in the United States (Hill, 1992). Table 1 provides descriptive statistics of the weighted sample.

Empirical Models

Reservation Wage Rate

The specific methodology of the opportunity cost method varies by study (Abdel-Ghany and Sharpe, 1996; Kidd, 1993; Wang, 1994; Zick and Bryant, 1983, 1990). The three stage method developed by Heckman (1974) of estimating a reservation wage rate is used. The probability of work equation, estimated using Probit, is written as:

$$Y = \exists_0 + \exists_1\text{C\_AGE}+\exists_2\text{C\_EDUC}+\exists_3\text{C\_KIDS}+\exists_4\text{WRKEXP}+\exists_5\text{HHELDER} + \exists_6\text{OWNSHOME} + \exists_7\text{HHILL} + \exists_8\text{ADLS} + \exists_{19}\text{IADLS} + e \qquad (1)$$

The second stage is comprised of three equations, the wage rate for employed caregivers, the reservation wage rate for nonemployed caregivers, and hours of work for employed caregivers. The wage and hours equations are estimated using Ordinary Least Squares (OLS). The equations are:

$$W = !_0 + !_1\text{C\_AGE} + !_2\text{AGESQ} + !_3\text{C\_EDUC} + !_4\text{WRKEXP} + !_5\text{EXPSQ} + !_6\text{AREA} + !_7\text{UNEMP} + !_8\text{LAMBDA} + e_1 \qquad (2)$$

$$W^* = \exists_0 + \exists_1\text{C\_AGE}+\exists_2\text{AGESQ}+\exists_3\text{C\_EDUC}+ \exists_4\text{WRKEXP}+\exists_5\text{EXPSQ}+\exists_6\text{AREA}+\exists_8\text{LAMBDA}+\exists_9\text{LABINC}+\exists_{10}\text{TRNSINC}\ \exists_{11}\text{ASSTINC}+\exists_{12}\text{SSINC}+\exists_{13}\text{C\_KIDS}+\exists_{14}\text{OWNSHOME}+\exists_{15}\text{HHILL}+\exists_{16}\text{HHELDER}+\exists_{17}\text{ADLS}+\exists_{18}\text{IADLS}+\exists_{19}\text{SIZE}+ \exists_{20}\text{AGEYNG} + \exists_{21}\text{E\_AGE} + \exists_{22}\text{E\_SEX} + \exists_{23}\text{E\_EDUC} + \exists_{24}\text{RACE} + \exists_{25}\text{HRS} + e_2 \qquad (3)$$

where W is the market wage rate, W* is the reservation wage rate, and e is an error term. The equation for the market wage rate is then set equal to the reservation wage rate for the sample of employed women since their reservation wage rates are equal to their market wage rate; the two equations are solved for hours of market work.

$$\text{HRS}=E_0+E_1\text{C\_AGE}+E_2\text{AGESQ}+E_3\text{C\_EDUC}+E_4\text{WRKEXP}+E_5\text{EXPSQ}+E_6\text{AREA}+E_7\text{UNEMP}+E_8\text{LAMDA}+E_9\text{LABINC}+E_{10}\text{TRNSINC}+E_{11}\text{ASSTINC}+E_{12}\text{SSINC}+E_{13}\text{C\_KIDS}+C_4\text{OWNSHOME}+E_{15}\text{HHILL}+E_{16}\text{HHELDER}+E_{17}\text{ADLS}+E_{18}\text{IADLS}+E_{19}\text{SIZE}+E_{20}\text{AGEYNG}+E_{21}\text{E\_AGE} + E_{22}\text{E\_SEX} + E_{23}\text{E\_EDUC} + E_{24}\text{RACE} + e_2 \qquad (4)$$

Once the coefficients have been determined for the hours of work and market wage rate equations, the coefficients for the reservation wage equation are calculated.

Imputed Market Wage

The method proposed by Kidd (1993) is a computationally simpler alternative approach that is based on Heckman's two-stage procedure. Heckman's model is criticized for its assumed bivariate normality of the regime-specific error term and the sample selection criterion equation error term. The bias arising from OLS estimation on a non-random sample is interpreted as an omitted variable bias. This problem is corrected through deriving the specification of the omitted variable, or the inverse of the Mill's ratio as calculated through the Probit estimation on the probability that a female works in the labor market, and uses this variable, lambda, as a regressor in the regime-specific structural equation. Kidd (1993) suggests the adoption of a variable representing the number of dependent children (KIDS) as an alternative proxy variable to Heckman's lambda term. Other research findings suggest that although number of dependent children do affect the probability of female participation and thus affect market wages, there is no direct causal relationship between wages and KIDS. We also include the number of elders in the household, HHELDER, for whom a daughter may provide care.

Following Kidd's method, the wage equation is run with KIDS and HHELDER as additional regressors using OLS. The variable KIDS and HHELDER serve as proxy variables for lambda in this equation identifying sample selection bias. The coefficients obtained from this equation are then used to calculate an imputed market wage for unemployed persons. The wage equation is written as:

$$W = !_0 + !_1 C\_AGE + !_2 AGESQ + !_3 C\_EDUC + !_4 WRKEXP + !_5 EXPSQ + !_6 AREA + !_7 UNEMP + !_8 KIDS + !_9 HHELDER + e_1 \qquad (5)$$

This wage is a measure of how much this person could potentially earn if s/he were employed in the labor market. It is different from a reservation wage rate which measures the price of a person's time in household production because the imputed wage from Kidd's method incorporates only market wage determining characteristics, *not* household production determining characteristics.

Results

Reservation Wage Rate Estimation

Table 1 shows the results of the OLS analyses and the calculated reservation wage rate coefficients for the sample. Lambda is not significant for either the wage or the hours equations indicating that sample selection bias is not present in this model. The calculated reservation wage rate based on weighted means of the sample is $5.42. The caregiving variables included in the analyses indicate that having elders in the household and the number of difficulties with IADLs the elder experiences increases the reservation wage rate. However, someone with a health condition in the household, the elder's age, and the number of difficulties with ADLs as reported by the elder have negative coefficients. These results are surprising; it was hypothesized that they would have positive coefficients. The negative coefficients may be explained in two ways. It is possible that the caregiver could is using formal services to care for elders who are frail or ill. The reduction in the reservation wage rate caused by the negative coefficients may increase the likelihood of the caregiver entering the labor market sooner to pay for formal services.

Another explanation may be that the production function for the household task of caring for an elder is such that time spent in performing the caregiving tasks results in a negative output for overall household production since only the elder benefits from the task being performed. In other words, during time spent in caregiving tasks the caregiver is operating on the negatively sloped section of the household production function where an additional unit of time spent on those tasks actually reduces the amount of output of household goods.

Imputed Market Wage Rate

Table 1 shows the results from the OLS equation. While only education was found significant, education and work experience both increase the market wage rate with work experience increasing the wage rate at an increasing rate. Age increases the wage rate at a decreasing rate. These findings are consistent with previous studies (Abdel-Ghany and Sharpe, 1996; Kidd, 1993). Both number of dependent children and number of elders in the household were not significant indicating that sample selection bias is not a problem in this equation. Recall for comparison that Heckman's lambda was not found significant for the wage equation. The calculated wage rate for the unemployed sample of caregivers is $2.20 based on weighted descriptives of the sample. This finding is consistent with economic theory stating that the individual will spend his/her time in the most productive activity.

Table 1

Descriptive Statistics and Parameter Estimates.

			Reservation Wage			Imputed Wage	
Variable	Definition	Mean (S.D)	Wage	Hours	Res. Wage	Actual Wage	Imputed Wage
C_AGE	Caregiver's age in years	55.46(8.09)	-.13 (.71)	45.77(86.0)	-.16	.53(.72)	-7.03(9.21)
C_KIDS	Number of kids under 18	.29(.68)		-294.9(131)*	.24	-47(1.04)	-1.66(.70)*
YNGKID	Age of youngest child if c_kids>0	1.42(3.77)		48.91(21.58)*	.04		
C_EDUC	Yrs. of education for caregiver	12.28(2.83)	1.02 (.21)*	-104.75(25.6)*	1.10	.68(.20)***	.64(.16)*
WRKEXP	# yrs worked full-time	4.61(3.95)	-.52(1.47)	14.4(19.0)	-.53	.77(.54)	.11(.52)
LABINC[a]	HH labor income	24213.10(7159.1)		-.1739E-03 (.1161E-02)	1.38E-07		
TRNSINC[b]	HH transfer income	2905.11(5549.64)		-.30E-01(.16E01)*	2.42E-05		
ASSTINC[b]	HH asset income	1373.68(3351.18)		-.43E-01(.41E.01)	3.39E-05		
OWNSHOME	= 1 if home is owned	.89 (.31)		157.43(227.92)	-.12		
SIZE	# of rooms in the home	6.60 (2.40)		1.17(1.52)	9.3E-04		
ADQSPACE	= 1 if #rooms > #required	.96(.19					
HHILL[c]	= 1 if a hh member has hlth cond.	.29(.46)		769.32(305.2)*	-.61		
HHELDER	# of elders in the household	1.06(.24)		135.74(572.82)	-11	-3.37(2.31)	-3.02(1.43)*
RACE	=1 if head and wife are white	.81(.39)		-70.15(169.76)	.06		
AREA	= 1 if household is in a SMSA	.45(.50)	-.87(.30E-01)	-116.16(35.1)	.01	-.29(.26)	.03(.23)
UNEMP	Local area unemployment rate	6.72(2.08)	.93E01(.30)	116.66(34.91)*		.29(.26)	.03(.22)
E_AGE	Elder's age in years	73.07(7.29)		11.37(13.36)	-01		
E_SEX	Elder's gender (= 1 if male)	.78(.41)		-91.43(200.84)	.07		
E_EDUC	Elder's education in years	10.46(4.14)		.40(.37)	-3.19E-04		
ADLS	# of difficulties with ADLs	.96(1.76)		138.14(69.47)*	.11		
IADLS	# of difficulties with IADLs	1.12(1.82)		- 301.93(84.75)*	.24		
WAGE	Hourly wage rate	5.98(8.97)					
HOURS	Annual hours of work	784.08 (888.41)			7.96E-04		
LAMBDA	Sample selection		.22(4.0)	-826.70(579.05)	.88		

[a] Excludes caregiver's and elder's labor income; [b] Excludes elder's income; [c] Excludes the elder

* p-value < .10, **p-value < .05, ***p-value < .01

Discussion

Overall, we found that the caregiver's time is worth $5.10 per hour in household production while their time spent in market work is worth $2.20. These wages can be considered an upper and lower estimate of the value of a caregiver's time. The imputed wage method only accounts for factors that influence productivity in the labor market, and thus is an estimation of the value of *market* work by unemployed women. The reservation wage method accounts for factors that affect household productivity and thus is an estimation of the value of household labor. It is known that the costs of informal care to caregivers can be large. Existing research has provided significant information regarding the *existence* of social, emotional, physical, and financial costs of informal elder care, but have lacked information that *quantifies* these costs.

This study found that caregiving affects the labor supply of married female caregivers in different ways. As hypothesized, the number of elders in the household reduces the probability of employment. The health of the elder as measured by the number of ADLs and IADLs the elder reports difficulty with have different effects on hours of market work. The number of ADLs increases work hours while the IADLs reduce work hours. Since ADLs are needs which could be met by formal services, such as a visiting nurse or home health aide, it is possible that the caregiver is increasing work hours to help pay for these services. Findings from the reservation wage equation are somewhat surprising. It was hypothesized that the number of elders in the household, health of elder, and age of elder would all increase the reservation wage rate. In fact, they all decrease it. The negative coefficients for these variables may be explained by the use of formal services. The PSID lacked information regarding formal care services and therefore this explanation cannot be explored. However, it is known that the use of formal services by informal caregivers of the elderly is becoming increasingly popular, especially as the number of women entering the labor force increases. The top two fastest growing occupations for 1994-2005 are personal home care aids (+119%) and home health aids (+102%) (US Bureau of the Census, 1996). Future research should examine the use and role of formal services.

Another explanation for the negative coefficients could be that caring for an elder is such that it actually reduces household output since the only elder benefits from this task. Time spent in caregiving tasks would then lie on the negatively sloped section of the household production function. Just as employed caregivers experience a loss in wages through a reduction in work hours as a result of caregiving, unemployed caregivers also experience decreased productivity in the household. This not only has implications for the caregiver but also for the household. Either members of the household consume less household goods, such as clean laundry or a cooked meal, or they must increase their time in household production to maintain the same level of consumption.

The imputed wage method reveals much less to us about the caregiving household. This method estimates the value of time based on market wage determinants and therefore is estimating the value of a person's time in the *market* and not in the *household*. The reservation wage method incorporates household production characteristics and is therefore a more accurate measure of the price of time in household production, or more specifically caregiving. The results of this study show that the caregiver's time is worth much more spent in the household caring for the elder rather than working in the market place (to pay for formal services). This outcome confirms the theory of labor supply.

The primary objective of this study was to estimate the value of informal care to elders. Families are a large part of long-term care arrangements for elders. The estimates provided here are a step toward the recognition of the importance of families as caregivers. They can be used in determining an amount of reimbursement or subsidy for informal caregivers in future elder care policies. Families are a huge resource for elders and it is important that policy makers do not neglect this resource as the elder population grows and budgets for elder care decrease.

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Endnotes

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Consumer Interests Annual *Volume 44, 1998*

Determinants of Defined Contribution Plan Employee Participation: A 403(b) Perspective

Discriminant analysis was used to both differentiate between and to classify sample respondents into distinct 403(b) participation groups. Data were obtained from a survey of employees from a southeastern research university (N = 1,075). 403(b) participation was best described by a function of respondents' income, occupation, education, investment knowledge, and risk preference. A classification rule was developed that offered a better than by chance classification success rate of 71%.

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As employers continue to replace defined benefit plans with defined contribution plans, fears among employees about their future economic security have increased. Groups of workers, "primarily those with low incomes and less education, are at risk of receiving little or no pension income," because they lack the knowledge and awareness of how changes in retirement planning will ultimately affect them (Government Accounting Office, 1996, p. 2).

Currently 35% of the U.S. work force is eligible to participate in a defined contribution plan. Of those who are eligible, 71% contribute to a defined contribution plan (Poterba, Venti, & Wise, 1995). Taken together, contributions to 401(k)s, 403(b)s, 457s, IRAs, and Keoghs account for almost 53% of total retirement savings (Foster, 1998; Poterba et al.). The importance of these plans as sources of retirement income is anticipated to grow in the future as the result of reductions in defined benefit plans.

The literature concerning the determinants of retirement plan participation is abundant. However, literature reporting which demographic, socioeconomic, and attitudinal determinants affect defined contribution plan participation, and which are most effective for use in classifying employees into participating and non-participating groups, is scarce. As Poterba and his associates (1995) pointed out, "standard assumptions about the determinants of saving behavior leave important aspects of actual saving unexplained, and thus encourage us to look more broadly for explanations of savings behavior" (p. 28). The purpose of this paper is to report the findings of a discriminant analysis that used selected demographic, socioeconomic, and attitudinal characteristics to both differentiate between 403(b) participation levels and classify sample respondents into distinct 403(b) participation groups.

Background Review

Employees who participate in defined contribution plans, including 403(b) plans, are responsible for determining the level of their retirement income. The ultimate determination of retirement income from 403(b) savings plans is derived from two sources: (a) the amount contributed to the employee account, and (b) the amount earned on contributions within an account. Employees who do not contribute to their own retirement accounts run the greatest risk of a deteriorating level of living during retirement. According to the Government Accounting Office (GAO) (1996), low-income elderly Americans are more likely to rely solely on Social Security benefits, primarily because low-income retirees have no other source of retirement income, such as a defined contribution (e.g., 401k or 403b) or IRA saving plan.

Demographic, socioeconomic, and attitudinal factors have been found to affect savings behaviors. Hogarth (1991) concluded that the determinants of differences between individuals who actively took steps to save for future goals and those who did not included age, education, gender, income, marital status, and other factors. Li, Montalto, and Geistfeld (1996) determined that a person's income and age was important when predicting who would be more likely to plan for retirement. Zhong (1994) also found that socioeconomic factors such as income, education, age, and gender play an important role in explaining the differences in savings behaviors and asset allocation decisions.

Dolan (1991) reported similar findings regarding women's participation in employer-sponsored pension funds. She found that pension participation for women differed based on income, occupation (e.g., professional more likely to participate), and economic expectations, but not on marital status. In a related study of flexible spending accounts, Hampton, Kitt, and Greninger (1990) investigated factors that influenced the decision to participate in a flexible spending account. Participants in the plan were more likely to be better educated, male, older, married, and to have higher incomes than non-participants.

Davis (1993) examined the determinants of holdings of IRAs, Keoghs, CDs, bonds, money market mutual funds, money market deposit accounts, and stocks. She concluded that higher levels of education and income, among other factors, were significant in increasing savings, and that being married specifically increased participation in a pension plan. However, gender was not a significant factor in determining participation in any type of savings program. Malroutu and Xiao (1995), using data from the 1989 Survey of Consumer Finances, determined that age, education, and employment status, among other socioeconomic factors, influenced financial preparation of preretirees for future retirement. In general, Malroutu and Xiao found that older workers with higher educational levels were more likely to voluntarily participate in a retirement plan, while younger married individuals were not.

After analyzing results from a survey of nonfarm self-employed workers, DeVaney, Su, Kratzer, and Sharpe (1997) concluded that respondents who were older, married, and high income earners were more likely to have larger total retirement savings. Other researchers also have concluded that demographic, socioeconomic, and attitudinal factors influence retirement savings plan participation decisions by employees. Yuh and DeVaney (1996) determined that an employee's age, gender, occupation, income, marital status, and attitudes affect the amount individuals and couples contribute to defined contribution accounts. Li et al. (1996), Poterba et al. (1995), and Xiao (1995) concluded that increased levels of income lead to heightened pension plan participation. The GAO (1996) found that increased educational attainment and being male were associated with increased pension plan participation. Finally, greater occupation status (e.g., being professionally employed) was found by Grable and Lytton (1997) and the U.S. Department of Labor (1992) to be a significant factor affecting pension plan participation.

Attitudes and financial knowledge also have been found to affect retirement plan participation. Sung and Hanna (1996), Yuh and DeVaney (1996), and Yuh and Olson (1997) concluded that risk tolerance is an important factor that impacts retirement planning decisions, with individuals who have higher levels of risk tolerance being more likely to save for retirement. Zhong (1994) concluded that expectations about future economic events, including income growth, were significant determinants of retirement plan participation.

Knowledge of financial risk and investments also has been found to influence retirement plan participation (Grable & Joo, 1997; Grable & Lytton, 1997). Myer and Haldeman (1991) suggested that increasing employee understanding of money management issues, including risk analysis and investment planning, led to increased levels of employee knowledge, confidence, and savings. In general, increased levels of risk tolerance, positive future economic expectations, and increased knowledge of investments have been found to increase participation in all types of savings programs, including defined contribution (e.g., 403b) plans.

Methodology

Data

Data were obtained from a 1997 survey of employees from a major southeastern United States research university. Employees chosen for inclusion in the sample were randomly selected from a listing of all faculty and staff. A modified Dillman (1978) method was used to direct the management of the survey. Specifically, one-half of all employees (i.e., 2,000) received a financial and risk assessment questionnaire. A reminder card was mailed two weeks after the first questionnaire was sent. A duplicate questionnaire was then mailed one week later. The useable response rate was 54%, resulting in 1,075 respondents for this analysis.

Variables

Dependent Variable. Respondents were asked whether or not they "voluntarily have contributions withheld from your earnings to fund a tax-deferred retirement plan -- a 403(b) -- offered through the University?" Responses to this question were coded dichotomously (i.e., 1 = yes; 0 = no).

Independent Variables. The following independent variables were used to profile the demographic, socioeconomic, and attitudinal characteristics of the respondents: (a) gender, (b) age, (c) employment classification,

(d) income, (e) marital status, (f) educational level, (g) knowledge of investments, (h) economic expectations for the next five years, and (i) financial risk preference, which was measured as respondents' preference for financial volatility. (Risk-preference scores were developed from an expanded risk assessment instrument as presented by Grable and Joo (1997). The reliability of the instrument was .78.)

Analysis

Discriminant analysis was used to determine which demographic, socioeconomic, and attitudinal characteristics best differentiated between participation and non-participation in the university's defined contribution plan (i.e., 403b). For the purposes of this study, participation was defined as making a current contribution to the retirement savings plan. Discriminant analysis was chosen as the method of analysis, because the procedure accounts for possible interactions among independent variables. Discriminant analysis works to maximize interactions among variables by analyzing both within-group variability and between-group variability. The result of this type of analysis is (a) a rank ordering of independent variables which account for (i.e., explain) the most variance in differences within the dependent variable, and (b) a classification equation that can be used to predict group membership.

Findings

Sample Characteristics

More women (55%) than men (45%) responded to the survey. Seventy-two percent of the sample were married, with 28% being either never married, separated, divorced and presently unmarried, or widowed. Respondent ages ranged from 20 years to 75 years, with an average of 43.52 years and a standard deviation of 10.34 years. Twenty-two percent of respondents reported incomes less than $30,000, while 48% had incomes between $30,000 and $69,999. Thirty percent indicated having incomes greater than $70,000. Respondents who were employed in a staff position (i.e., non-professional) outnumbered members of the faculty (62% and 38%, respectively). The majority of respondents possessed a four year college degree or higher (63%), while the remainder (37%) had an Associate degree, high school diploma, or less than high school education.

Fifteen percent of respondents considered themselves very knowledgeable about investment concepts, which was almost twice the percentage that had no investment knowledge (8%). The remainder of the sample (77%) indicated having either a somewhat vague or moderate knowledge of investments. Approximately 78% of sample respondents indicated that they expected future economic conditions over the next five years to be about the same or worse. Only 22% of respondents thought that economic conditions would be better over the next five years. Nearly 27% of respondents were classified as having low risk preferences. The majority of respondents (60%) were classified as having moderate risk preferences, with 13% being classified as having high risk preferences. Finally, 44% of respondents indicated participating in the university sponsored 403(b) plan, while 56% did not.

Discriminant Analysis Results

Table 1 provides the independent variable means, standard deviations, and measures of statistical significance for the independent variables. F-tests indicated that all of the variables, except economic expectations, were univariate significant at the .01 level.

Pooled within-group correlations between discriminating variables and canonical discriminant function coefficients are provided in Table 2. These coefficients indicate the relative importance of each variable, taking into account interactions between and among the independent variables, in determining retirement plan participation. For ease of interpretation, the coefficients presented in Table 2 can be interpreted similarly to beta weights in multiple regression or scores in factor analysis. For example, as a determinant of defined contribution plan participation, income, with a coefficient of .76 was the most significant differentiating factor between participation and non-participation in the 403(b) retirement savings plan. Using all of the variables, the value of Wilk's lambda was .7935. The discriminant function thus accounted for approximately 20% of the variance.

According to Huberty (1994), "the idea behind the use of structured coefficients is that the variables that share the most variation with a given construct should define what attribute the construct represents" (p. 209). Thus, participation in the 403(b) plan can be explained most effectively by the variables income, occupation, education, investment knowledge, and risk preference with coefficients of .76, .68, .62, 58, and .51, respectively. Age, gender, marital status, and economic expectations offered very low differentiating power between participation and non-participation in the defined contribution plan.

Table 1
Group Means, Standard Deviations, and Statistical Significance of the Independent Variables

	403(b) Participation		Non-Participation				
Variable	Means & Percents	SD	Means & Percents	SD	Wilk's Lambda	F	Sig.
% Men	54	50	39	49	.9776	24.5844	.0001
Avg. Age	46.30	10.05	41.36	10.05	.9438	63.8657	.0001
% Married	78	42	68	47	.9887	12.2736	.0005
% Employed as Faculty	56	50	24	43	.8926	129.0438	.0001
Avg. Income	$60,500	$25,000	$42,000	$22,700	.8690	161.7906	.0001
% With 4 Year Degree or More	79	40	50	50	.9097	106.4698	.0001
Avg. Investment Knowledge	2.9469	.7575	2.4735	.8151	.9187	94.9490	.0001
Avg. Risk Preference	38.6295	6.3099	35.3907	6.1767	.9376	71.3979	.0001
% With Positive Economic Expectations	25	43	20	40	.9974	2.7852	.0954

Table 2
Pooled Within-Group Correlations Between Discriminating Variables and Canonical Discriminant Functions

Variable	Defined Contribution Coefficient
Income	.7613
Occupation	.6799
Education	.6176
Investment Knowledge	.5832
Risk Preference	.5057
Age	.4783
Gender	.2968
Marital Status	.2097
Economic Expectations	.0999

Predicting 403(b) plan participation. The final step in the analysis involved testing the effectiveness of the independent variables as predictors of 403(b) plan participation. The overall percentage of respondents who were classified correctly, using all of the factors simultaneously, was 71%. It was concluded that this classification success rate was better than by chance classification.

Conclusions

Participation in the defined contribution plan used by respondents in this study was best described as a function of income, occupation, education, investment knowledge, and risk preference, with income explaining the most variation. Specifically, this research confirmed results from previous studies that suggested that retirement plan participation increases with income (e.g., Committee for Economic Development, 1995; Poterba et al., 1995). It also was determined that being employed in a professional position (i.e., faculty) led to proportionately higher participation in the 403(b) plan. Respondents with higher levels of attained education also were more likely to participate in the plan than respondents with lower educational attainment.

A high level of knowledge concerning investments was found to be an effective determinant of 403(b) plan participation. Respondents with the least knowledge of investments were proportionately more likely not to participate in the defined contribution plan. It also was determined that risk preference, as an attitude related to accepting financial volatility, was positively related to 403(b) plan participation, with respondents who scored higher on the risk preference assessment more likely to participate in the plan. This research confirmed assertions made by Grable and Joo (1997) who suggested that an investor's increased knowledge of investments, including risks and returns, was a significant factor in determining portfolio asset allocations, and as such, someone's likelihood of participating in a retirement plan.

Equally important to note are the demographic, socioeconomic, and attitudinal characteristics that that were less effective in explaining variations in 403(b) plan participation. Future economic expectations were not a significant factor in differentiating between participation groups. Even though age, gender, and marital status were univariate significant, these three variables, both individually and collectively, explained little variation in 403(b) plan participation.

Implications

The results of this research suggest that the best way to increase participation in a retirement savings plan is to increase employee incomes. A second way to increase participation in a retirement plan is to increase employee knowledge of investments. This is an important implication, because educators, administrators, and researchers are usually not in a position to change employee incomes in the short-run, but these professionals are in an ideal position to dramatically influence levels of employee knowledge. In addition to increasing an employee's income and knowledge of investments, 403(b) plan participation can be heightened by a change in an employee's occupational status from non-professional to professional, increasing an employee's attained educational level, and increasing someone's financial risk preference.

These findings can be incorporated into the design and promotion of 403(b) plans. For example, promotions should be targeted toward employees who face the greatest threat to financial security in retirement, namely, employees with low levels of income, low attained educational levels, lower status occupations, and those with low levels of investment knowledge and risk preference, because these employees are proportionately more likely not to participate in a defined contribution plan.

When designing promotional materials to increase 403(b) participation rates, plan administrators should develop user-friendly, easy to read, and non-intimidating materials that will appeal to lower income, less educated, and less investment savvy employees. Promotional materials designed for more sophisticated audiences may fall on a deaf ear, because employees in higher ranking occupations who earn more income, have higher attained educational levels, and more investment experience are already more likely to participate in a plan, regardless of promotions by pension administrators to increase participation rates.

Additionally, pension administrators and educators need to take a more proactive approach when increasing the awareness and knowledge of their employee base. Research has shown that employees with low levels of income and education often have poor personal finance skills (Garman, Leech, and Grable, 1996), which often leads to underutilization of pension plan alternatives, and ultimately, an increased level of financial insecurity. Pension administrators and educators can help reverse this apparent lack of security by providing employees with basic budgeting and personal finance education. As this research suggests, this type of education will lead to an increased level of retirement savings via defined contribution plans.

Further, pension plan administrators and operating managers have a responsibility to provide employees with (a) adequate, accurate, and useable information about retirement plan options; (b) broad based personal finance educational programs; (c) retirement savings options that meet the needs of all employees, regardless of risk preferences, knowledge, education, occupational status, or income; and (d) ongoing education regarding investing and personal finances that will continue to increase employee awareness of pension plan alternatives. It is acknowledged that the scope of these responsibilities may require an increased availability of benefits staff persons and an increase in appropriate products and services. If administrators and managers hope to increase participation in retirement plans, and thus reduce their long-term fiduciary responsibilities, these steps need to be taken today.

In conclusion, employers no longer give employees a gold watch the day they retire. Employees' future retirement security is increasingly reverting back to the employee, and both employers and employees must recognize the need for more self management of retirement savings on the part of employees. This will require an increased level of education and training on the part of employers. To this end, the results from this study can assist educators and researchers when developing pension plan promotions.

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Endnotes

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The Concept of Desired Wealth at Retirement

Labor supply theory is used in conjunction with the Life-Cycle Income Hypothesis to generate a model of retirement where the individual compares available lifetime consumption with desired lifetime consumption. Available lifetime consumption is referred to here as "per-period wealth" or "actual wealth," desired lifetime consumption is referred to here as "desired wealth at retirement" or "reservation wealth". A Strategy for estimating reservation wealth is outlined, and is implemented using the 1992 Survey of Consumer Finances. Diagnostics are used to examine with what precision the reservation wealth model predicts retirement behavior, and some implications of the model for individuals and families planning for retirement are discussed.

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Over the next 20 years, the world's population will become older and older. The aging of the world's population, perhaps the most significant demographic event in recorded history, will bring many new challenges. In the United States, as well as in other countries, two of these challenges will be near the top of the list. The first is how the country will manage the dramatic changes in the labor market, which will undoubtedly occur as the 1945-1960 birth cohort, known as the baby boom, begins its collective exit from the labor force If this cohort behaves as recent ones, this mass exodus will occur during the years 2010-2020, when most of the "boomers" will be in their 60's. The second major challenge is to figure out how resources will be set aside to support this cohort. Even today society spends considerable amounts of resources, particularly health care resources, on individuals nearing the end of life. Once the baby-boom reaches these older ages, difficult questions regarding the extent to which the relatively small number of working Americans can support the elderly will need to be addressed.

One major parameter which is extremely relevant to any of these discussions is commonly referred to as retirement. Understanding when and why individuals decide to exit the labor force, collect a public or private pension, or enter a nursing home, is of vital importance to understanding the constraints society faces in the next 50 years. In this dissertation, we will try to better understand why so many people exit the labor force in their 60's, and why they never return. It will be maintained here that retirement is essentially a consumption-driven decision, and is consistent with the Life-Cycle Income Hypothesis. We will introduce the concept of *reservation wealth*, the wealth at which an individual is indifferent between retiring and not retiring. We will use economic theory to hypothesize as to the determinants of an individual's reservation wealth. We will develop a strategy for estimating reservation wealth using a cross section of retired and non-retired individuals, and we will implement this strategy, simultaneously testing the reservation wealth model and economic theory.

The dissertation I have written goes as follows. Chapter two is a comprehensive description of the retirement phenomenon. The chapter begins with a survey of retirement's many possible definitions, supplemented with data on age specific labor-force participation, income, and pension patterns which help to characterize the dynamics of retirement. This part of the chapter can be thought of as an overview of "the demography of retirement." Next, the chapter surveys the literature on retirement decision making and retirement well-being, begging the question "why do people retire?" The chapter ends with a brief review of the non-economic literature on the determinants of post-retirement well-being.

Chapter three is an introduction to the methods that economists have used to explain retirement behavior. It starts with the earliest and most basic models used and ends with those most up to date and complicated. It is both a brief primer on the theory of static and inter-temporal labor supply and a review of the literature on the economics of retirement decision making. Most of this literature comes from the realm of labor supply and is empirical in nature. Nevertheless, one can see that much of this literature is model-driven, and complements the theoretical introduction quite nicely (hence the intertwining of the modeling and literature review sections into one chapter). We shall also see that our understanding of retirement is enhanced greatly by a few important labor demand considerations.

Chapter three concludes with the following thesis: retirement is essentially a consumption issue: it occurs when individuals and families feel as though they could consume sufficient amounts without having to work. The following three chapters are concerned with conceptualizing this sufficient level of wealth, or "reservation wealth," hypothesizing as to the determinants of reservation wealth, and estimating reservation wealth for individuals.

Chapter four outlines a definition of wealth. This definition attempts to capture all relevant and dynamic aspects of "lifetime consumption," including length of lifetime, future prices, interest rates, and the uncertainty inherent in these variables. The procedure for this new calculation of wealth has two steps. First, using contingent claims modeling techniques, the present value of assets, liabilities and future entitlements will be calculated. This present value can be interpreted as the "conventional" measure of wealth. The second step uses these same contingent claims pricing techniques to calculate the expected per period stream of income that a household could afford itself per year until termination, given the random processes of death, interest rates, and inflation. This per period stream is analogous to the coupon rate of a fixed income security, and serves as an age-standardized measure of wealth. Procedures will also be taken to account for the size of the household and its relationship to income needs. Intuitively, this definition serves not only as the criterion for retirement, but also as a measure of household well-being. Chapter 4 concludes with an application of the model. Using the 1992 Survey of Consumer Finances (SCF), two distributions of wealth for American households are compared: the distribution using the new age-standardized definition of wealth outlined here, and the distribution using the standard definition of wealth. We will also test the robustness of the model by examining the sensitivity of the results to assumptions about prices, interest rates, Social Security policy, life expectancy, and household economies of scale.

Chapter five uses economic models of time allocation to hypothesize the minimum wealth (wealth, as defined in Chapter four) a neoclassical utility maximizer would need to voluntarily cease participation in the labor force, with the intent of not returning. Again, this is what we are calling reservation wealth. First, a conceptual model of desired wealth at retirement is presented. Next, economic theory is used to analyze theoretically the determinants of reservation wealth. In these models, the utility maximizer may have a spouse, other dependents such as young children or older parents, or both; therefore, all such cases will be examined to see how characteristics of other household members, if any, impact upon the decision of how much wealth the household must have for the individual to retire.

Chapter five also includes a digression on a "buyout" model of labor force exit, which examines how much wealth one would have to give an individual in exchange for termination of their employment at a specific job, given, among other things, their expectations about wages offered elsewhere. This secondary model, while somewhat similar to the reservation wealth model, takes two major points into consideration. The first is that an individual who finds utility in work would never voluntarily retire, and so reservation wealth as we have defined it does not exist, yet this "buyout wealth" should theoretically exist for all individuals. The second is that for an employer, this latter model would certainly be of more importance that the former, and this second model seems to address many of the demand-driven aspects of the retirement phenomenon alluded to in Chapter two.

Chapter six proposes a strategy for estimating reservation wealth using a strategy similar to Heckman's (1974) strategy for estimating reservation wages. The result of Chapter four is a specification for wealth (or "offered wealth," similar to Heckman's "offered wage"). The result of Chapter five is a specification for reservation wealth (analogous to Heckman's reservation wage, or "shadow price of time"). A maximum likelihood technique for estimating the coefficients in the reservation wealth equation is used on households from the 1992 SCF (for whom wealth has already been calculated in Chapter four). The reservation wealth estimates are compared to the hypotheses in Chapter five regarding reservation wealth. Chapter seven represents the commitment on the part of the author to extend any benefits of the research found in the previous six Chapters to any individual or household planning for retirement. After a brief survey of the popular literature on how to save and invest for retirement, the findings from chapter six will be compared to conventional wisdom regarding income needs during retirement. This will be an opportunity to compare the "positive analysis" done here with the "normative analysis" of retirement planners. Furthermore, the validity of the results from Chapter six will be tested by examining what proportion of the retired individuals in the 1992 SCF the model predicts to be retired and what proportion of the working individuals the model predicts to be working.

Endnotes

1. Assistant Professor, Department of Housing and Consumer Economics. This is a summary of my dissertation entitled "A Model of Desired Wealth at Retirement, an Estimation Strategy, and Evidence from Cross-Section Data." It is available in mimeograph from the Cornell University Library.

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Scanning Certification: The Pennsylvania Model

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Introduction

Scanning is a technological innovation that uses an electronic "reader" to identify the price of an item. Scanning matches product prices which are stored in a computer with universal product codes (UPC), a series of bar lines printed on product labels. Scanners use low power laser beams to electronically scan UPC product codes. For consumers, scanners promise faster checkout, more accurate pricing, more informative receipts, and, possibly, a slower rise in prices. These savings were projected to be around 2 percent to 3 percent. For retailers, scanners offer improved checkout productivity, elimination of manual entry errors, decreases in labor costs, automatic reordering, better sales analysis and item tracking, and an efficiency in labor scheduling. Savings were projected to be about 3 percent to 4.5 percent (Goodstein, Escalas, 1994). While scanning is intended to be quicker and more accurate than manual cash register entry, since the invention of scanner technology in 1972, consumers have been worried about the accuracy of the price scanners in grocery stores.

In the early 1960's, Harwell's (1963) found an average of 11.3 percent of the items entered on manual cash registers in error, and Harwell and Kinslow (1978) found an average of 0.31 percent net loss to retailers due to undercharges. In 1982, Gabe (1982) compared electronic scanners and electronic cash register systems finding that "in the scanning system the overall error rates ranged from 4.18 percent to 5.36 percent, compared with 5.86 percent to 7.12 percent in the electronic system. New York City's Department of Consumer Affairs 1991 found overcharges were ten times more likely than undercharges for sale items (O'Connell, 1993). Finally, a study conducted by Goodstein (1994) reveals those error rates for sale items and end-of-aisle displays in scanner-equipped stores exceed those for regular priced items. *Money* magazine estimated that scanner computer losses to consumers amount to one billion dollars in overcharges each year (O'Connell, 1993). Information Week estimates losses to be around 2.5 billion dollars a year.

Such studies and reports of pricing inaccuracy have led many states and local communities to develop or consider laws or voluntary programs to help protect consumers from scanner errors at the cash register. The food marketing industry also recognizes the value of pricing accuracy in a 1994 report which stated, in part: "There is no doubt accurate pricing is essential to the grocery industry. Whether customers are undercharged or overcharged, confidence and loyalty are undermined. Pricing errors also impact the accuracy of scan data when it is pulled from the system to analyze sales, promotions, inventory and profitability." (Food Marketing Institute 1994.)

In Pennsylvania, the Pennsylvania Food Merchants Association (PFMA) called together a group of industry, consumer, labor and government representatives who designed and established a voluntary Scanning Certification Program (SCP). This paper describes the SCP which has become a model nationally and provides data on experiences to date.

Study Questions

Previous studies and concerns of consumers and the food marketing industry lead to a number of questions about scanning certification that will be addressed in this paper. Four questions/issues and six hypotheses are addressed below. First, are consumers being charged the lowest advertised price at checkout? *Hypothesis A: Stores with scanners will have higher error rates than shown in previous studies of mechanical and electronic checkout.* Second, when errors occur, are consumers paying more than they would if a correct bill were tendered? Probability theory would predict a 50/50 split over time for undercharges and overcharges. Skeptical consumers would say that stores overcharge purposely as a technological version of the "low-ball/high-ball" scam. Store managers would say that regular items that do not have price changes are at higher risk since they are not attended to as frequently as items with frequent price changes and thus undercharges would be more frequent. Studies of older technology, mechanical and electronic checkout (non scanner), find that undercharges are more frequent than overcharges. *Hypothesis B: Assuming that no* *systematic bias is skewing the system, undercharges and overcharges will balance out. Hypothesis C: The financial pinch will lead stores to overcharge to meet their margin: overprice errors will be more frequent than underprice errors. Hypothesis D: Most errors will occur in regular priced items compared with special, prepriced, item-priced or end-aisle stacks.* Third, previous studies have suggested that human mistakes are the main source of errors and not the technology and machines it produces. *Hypothesis E: The source of the majority of pricing errors identified by the SCP will be human errors not scanner errors.* Finally, does experience with the scanning accuracy process affect performance? *Hypothesis F: Accuracy Increases Over Time.* The next section gives an overview of the development and operation of the Pennsylvania Scanning Certification Program (SCP). The following sections provide an overview of development of the SCP, the sampling plan, and analysis of data on the SCP toward addressing the six hypotheses above.

Development

The Pennsylvania Scanning Certification Program (SCP) was developed by a coalition of concerned consumers, grocery store and industry representatives, consumer researchers, and representatives of labor unions, state Weights and Measures professionals, and AARP, in cooperation with the Pennsylvania Food Merchants Association (PFMA). The coalition developed the program and subsequently established an independent nonprofit corporation, 501(C)(3), with its own budget and Board of Advisors. This Scanning Certification Board of Advisors handles all policy and program issues, problems, complaints and any other issues involving SCP. SCP has three general goals as follows: (1) pricing information: to assure that the prices of all items in the store are clearly identified for the customer; (2) pricing accuracy: to ensure that scanners charge the advertised price; and (3) certification: to provide public recognition for stores which have reached high standards in pricing accuracy.

For certification, stores must pass an annual inspection consisting of placement of Scanning Accuracy Policy signs, shelf label signs, properly labeled shelf tags, and a 200-item random sample of store items which include regular, sale, and end-of-aisle displays. SCP stores initially had to demonstrate a 97 percent accuracy rate for all of their scannable items; the level was raised to 98 percent in 1996. SCP stores must also adopt the scanning accuracy policy which is intended to provide incentives for both stores and consumers to identify pricing errors.

> If the scanned price of a product is higher than any shelf* or advertised price, the customer will receive that one item free up to a limit of $10.00. For an item over $10.00, the customer will receive $10.00 off the lowest shelf or advertised price. The customer will be charged the lower price for any additional items of that product in the order. ("Shelf" price includes any displayed or posted price. Void when prohibited by law.) (SCP 1993)

An educational component is also a key to the SCP. Stores that wish to enroll in SCP begin by ordering the SCP manual and attending a seminar on implementing the program. Stores must then conduct a self-study to see how they rate according to SCP policies. During this part of the process, stores implement different procedures to fully comply with SCP standards and policies. All employees dealing with scanners must know the SCP policy and what to do when errors occur. The results of the self-study are sent to the SCP manager who then schedules an unannounced inspection of the store within a month's time. Stores that fail the inspection may repeat the process. Certification is effective for one year from the date of certification subject to annual recertification. Interim unannounced spot-inspections are also part of the SCP program. As will be seen below, the educational component may be a key to higher levels of accuracy.

Sampling Issues

The SCP Board decided that the primary objective of the program is price verification of a representative sample of the items in a supermarket. Checking every item would be financially prohibitive. Statistical sampling allows prediction of the number of errors that would be found if all items were checked. Several approaches to sampling were examined: predetermined item selection, stratified sampling, cluster sampling, and simple random selection (Poister 1978; Henry 1990). After considering the pro's and con's of the different methods, a representative sampling process was chosen. *Random (representative) sampling* involves creating a procedure wherein every item in the store has an equal chance of being included in the sample. This approach gives equal probability to all items in the store. It is the simplest to implement. It is not bound by the nature or types of items included in the store. It does not require searching for specific items. It eliminates the possibility of bias being introduced by those who construct the list and those charged with selecting an item from the shelf (e.g., which brand or size of applesauce to choose for this store, and whether it is a sale or direct delivery item). This approach allows selecting a sample of items that represent the population of items in the store. Such a sample represents the accuracy of items in the store irrespective of the number and type of items carried. The one disadvantage of this approach noted by some observers is that it does not provide for targeting of high-probability of error items. However, following consultation with researchers at The Pennsylvania State University, the representative sampling approach was selected.

Systematic random sampling as implemented by the SCP involves a random start followed by sampling every Nth item. The key is determining the appropriate skip factor, the number of cases to be skipped over before choosing the next item. As noted by Poister (1978), "systematic samples are often used interchangeably with simple random samples on the assumption that there is nothing inherent in the procedure that would produce a biased sample." Population size is typically large--25,000 to 100,000 or more items--and will have little effect on sample accuracy. The SCP consulted several sampling experts on this issue and settled on 200 items for a probability sample at the 95 percent assurance level. A ten step sampling process allows the process to be carried out with a moderate amount of training.

Scanning Certification Results: Testing the Hypotheses

As noted, the Scanning Certification Program (SCP) seeks to provide pricing accuracy and appropriate pricing information for customers of certified supermarkets. The goals of the program are to provide standards for clearly identifying for customers the prices of all items in a store and to ensure that scanners charge the advertised price. SCP guidelines require stores to ensure that shelf tags are accurate and legible, that scanners are programmed to accurately charge *the lowest posted or advertised prices*, and that information about customer rights is available for consumers. The SCP has been in operation since 1991. New stores have been enrolled each year with the total reaching almost 500 stores in 1997. The following sections provide analyses of data on the SCP toward testing the hypotheses posited above.

Table 1
ACCURACY RATES FOR
BASELINE INSPECTIONS

Store 1	99.6
Store 2	99.1
Store 3	98.5
Store 4	97.4
Store 5	98.0
Store 6	95.8
Store 7	95.5
Store 8	94.8
Store 9	94.8
Store 10	94.5

Baseline Study N = 10

Hypothesis A: Accuracy Rates Compared to Traditional Methods.

A baseline study of ten stores using scanner technology conducted before the program started found an average accuracy rate of 96.90 percent. The range was from 94.5 percent for the store with the lowest accuracy rating to 99.6 percent for the store with the highest accuracy rating (see Table 1). The SCP Board considered these data and set the initial rate for certification at 97.0 percent.

To be awawded certification a store had to have an accuracy rating of 97.0 percent on the inspection. Both undercharges and overcharges are included in the rating. From 1991 to 1996 the average price-scanner accuracy for certified stores increased from the baseline of 96.90 percent to 98.57 percent. The overwhelming majority of certified stores are in the 98 percent and above categories (see Charts 1 and 2). These rates show higher accuracy levels for scanning systems than found in studies of mechanical and electronic checkout cited earlier. Hypothesis A is rejected.

Chart 1

Trend in Mean Accuracy Rates 1991-1996

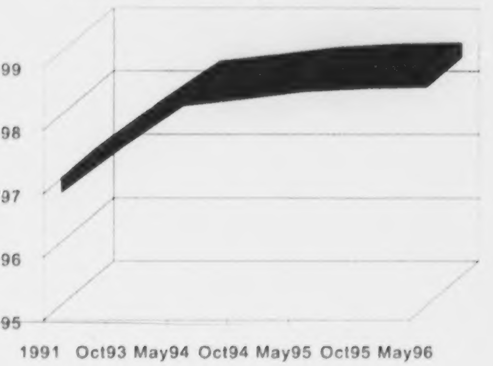
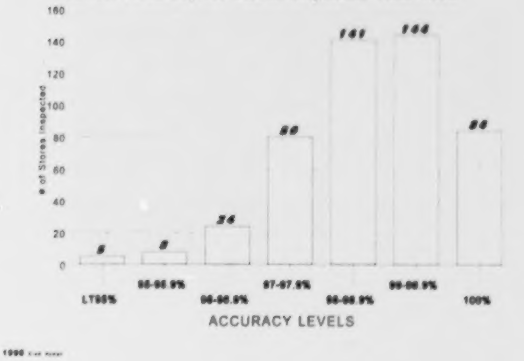


Chart 2

Scanner Accuracy for Stores Inspected 1993-1996



Hypotheses B & C: Overcharges vs. Undercharges. The SCP counts all errors in the certification process. Certification data show that undercharges routinely exceed overcharges. This pattern is evident in the baseline taken before the program started and in the data for each year since. These data are also consistent with figures provided by the Philadelphia Office of Weights and Measures, which inspects grocery stores as part of the city's item pricing law, and with data from full-store audits for supermarkets (SCP 1995).

For example, of all 87,440 items checked in the 1995 certification process, 1143 or 1.3 percent were in error. Of the items with errors, 69.6 percent were undercharges, 17.4 percent were overcharges, and 12.9 percent were items with no visible shelf or item price. The average undercharge for certified stores is $.40 and the average overcharge is $.30. The average error is a $.17 undercharge to the consumer. This means that a net average undercharge is the Abottom line≅ for the average customer. Hypothesis B, that over and under charges will balance out, is rejected. Hypothesis C, that financial incentives will lead stores to overcharge more than undercharge, is also rejected.

Hypothesis D: Errors in Regular vs. Special Items. The largest category of errors occurs with general grocery items compared to special categories such as direct delivery, frozen foods, health and beauty aids, etc. Chart 4 shows on the one hand that 43.5 percent of the errors detected are in the former area. On the other hand, the chart also shows that the majority of the errors are in the special areas, the largest two categories of which are frozen foods and direct delivery.

Chart 4

ERRORS BY PRODUCT TYPE

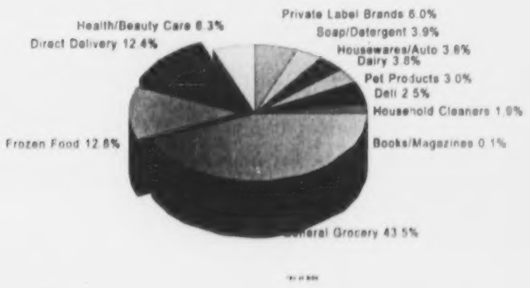


Chart 5

SPECIAL CATEGORY ERRORS--Ex. Gen. Groc.

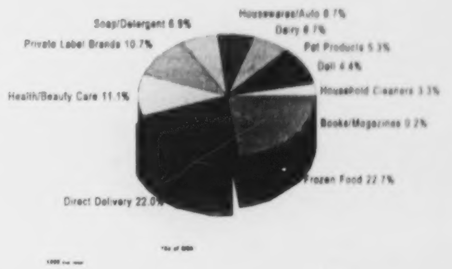
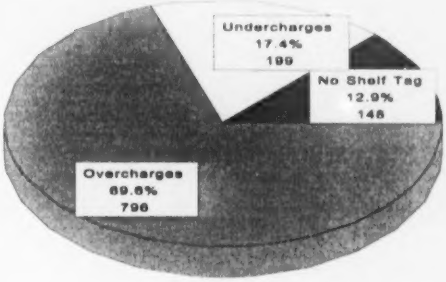


Chart 5 shows the distribution of errors for these special areas excluding the general grocery items. The frozen food and direct delivery items account for almost half of these errors. Different reasons are given by stores as the cause of these errors. Frozen food errors are typically attributed to the large variety of items in frozen food lockers and the small amount of space given to each; a similar situation exists for many health/beauty aids and housewares/auto items. As a result there are many labels, frequently in tiers or crowded together, which are easily misplaced or misread. Direct delivery errors are a different story. In this case, the store does not price the items or even place them on the shelves.

Chart 3

COMPOSITION OF ERROR RATES



These functions are not carried out by supermarket employees but by the wholesaler who prices the items and puts them in the store--direct delivery to the shelves. Reportedly, these people frequently change prices and do not inform the store manager or the scanning manager, resulting in errors at checkout. These results are similar to those reported in the literature and lead to rejection of Hypothesis D.

Hypothesis E: Accuracy Increases Over Time. Chart 1 (above) shows the trends in error rates for SCP stores from 1991 to 1996. In 1993 there were only 20 stores in the program. This increased to 72 in 1994, 190 in 1995 and 212 in 1996. First, as noted above, these data show that accuracy increases over time for stores in the program. Second, most of the stores inspected in the latter years were recertifications of stores already in the program. Similarly, accuracy increased during these years. Thus Hypothesis E, that stores that have been through the SCP process will be more accurate over time, is supported. This fact supported the SCP Board of Advisors desire to increase the level for certification. In 1996 the SCP increased the required accuracy rate for certification to 98.0 percent. Hypothesis E is supported.

Conclusions

The Pennsylvania Scanning Certification Program (SCP) was the first of its kind, and it remains the only non-governmental certification program to date. It provided the model on which both the Philadelphia law and the National Conference on Weights and Measures (NCWM) guidelines for national standards and procedures are based. The analyses above show a steady growth in the number of stores that voluntarily enroll in the certification process accompanied with a steady growth in the accuracy of stores certified. Despite these gains, most stores in the state remain uncertified. In December 1996, the Pennsylvania legislature enacted a law requiring an annual inspection for all retail checkout scanners, but exempts those that participate in an approved private certification program that provides inspections on an unannounced basis. The SCP is the only organization that has been so approved to date. In 1997, many additional stores applied to enroll in the voluntary SCP: the total is now approaching 500 stores in the program.

Analyses of data on the SCP lead to several conclusions. Stores with scanners in the SCP have lower error rates than shown in previous studies of mechanical and electronic checkout systems. When errors occur, average undercharges exceed overcharges in both number and amount of money involved. Errors occur for all types of items although some types of items such as frozen food and sale items do tend to have higher error rates than general grocery items. The source of most errors that do occur is human error of some type, not mechanical errors by the scanning machinery. Finally, we believe the educational and self-study components of the Pennsylvania SCP lead to higher levels of accuracy and compliance than do programs that do not have this feature. However, this study does not identify whether voluntary or government mandated certification/licensing is more effective. Nor does it address the issue of whether conscious pricing errors occur and are masked by the speed and efficiency of scanners. Further studies of these issues and replication elsewhere are tasks for the future.

We also suggest that scanning certification is not analogous to a zero sum game where consumers win and store owners lose or vice versa. Nor is this a program that gives consumers promises that things are well and no compensation when they are not. Scanning certification is like a variable sum game which offers both the store management and consumers benefit from pricing accuracy, and it provides consequences for store errors and incentives for identifying and eliminating them. Consumers benefit in two major ways. First, certification is provided only to stores that have been inspected and found to have an accepted level of accuracy. Interim inspections between regular certification visits contribute toward maintaining accuracy. This is reassuring but does not guarantee that errors do not occur--requiring the second consumer benefit. Second, consumers who detect overcharges on items they are purchasing receive a direct benefit via compensation as promised by the Scanning Price Accuracy Policy. This generally means that the consumer will receive free one of each product for which they detect an overcharge and the rest at the correct price.

Stores also benefit. First, customers who detect overcharges are provided immediate redress and do not go away mad. In fact, providing a free item produces quite the opposite reaction in most consumers. Studies show that many consumers do not complain to the store management about problems but they do tell others and may also stop shopping there (Hyman, Shingler and Miller (1992). Happy customers return. Second, the store has the opportunity to correct the source of the overcharge and avoid additional errors and unhappy customers. Third, the SCP inspection procedure identifies undercharges as well as overcharges. In fact, the average inspection identifies more dollar value in undercharges than overcharges. Stores where this occurs have the opportunity to initiate procedures to correct undercharges, thus recouping dollars that otherwise would have gone out the door. Finally, a periodic inspection gives an independent overall measure of the efficiency of the store's pricing procedures. Owners and managers can benefit from learning about areas where they are doing well and where attention is needed.

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Consumer Acceptance of a New Product: A Case Study of Precut Carrots

This paper examines consumer responses to the introduction of a new product for which there is a close substitute. Precut carrots are a health and a convenience food and are an alternative to more traditional packaging of carrots. Supermarket scan data are used to evaluate the pricing behavior of a food retailer and food shopper purchases of regular and precut carrots. The time period starts well before precut fresh vegetables were available and continues for an extended period following the introduction.

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Introduction

Consumers are constantly faced with new products. Emerging lifestyles and diet/health related concerns have resulted in the introduction of many new goods and services, especially in the food sector. New Product News reported that for fruits and vegetables, the number of new products were 487 in 1994, 545 in 1995, and 554 in 1996 (ASM Communications 1997). At the same time fresh vegetable consumption has been increasing. In particular, carrot consumption increased from 9.6 pounds per capita to 10.1 from 1994 to 1995, the most recent year for which data are available (Food Institute 1997).

Precut fresh vegetables is one food category that reflects the dynamics of consumer demand and food retailing. Technical advances in packaging permit some fresh vegetables to be packaged in ready-to-eat form by processors and sold in retail outlets. Since their introduction in the 1990s, precut has become an important segment. According to Nielsen data, precut sales for the 52 weeks ending February 27, 1997 were $689 million, of which $481.1 million were for precut carrots, and prepackaged salad sales (a separate category) were $836.0 million for the 52 weeks ending January 25, 1997 (Vance 1997).

Important consumer issues are associated with the introduction of precut vegetables. One pertains to the pattern of consumption of the new product by itself. Another is the effect of the new product on the demand for substitutes and complements. A third is the pricing strategy used when the new items are introduced. These issues can be addressed through an analysis of supermarket scan data, although such analyses have not been presented in the literature. The present paper fills this void using a time-series that spans the period during which precuts were not available, then they were introduced, and subsequently both regular and precut packaging forms were available.

Data

Scan data covering the weeks ending May 14, 1988 through March 16, 1996 for five supermarkets that are part of the same chain operating in a metropolitan area in the Southeast are used. Stores are located in separate neighborhoods that are average to above average in terms of income and are relatively homogeneous with respect to race and age distributions. Weeks represent seven-day periods that begin Sunday morning and end Saturday night. The pricing period matches the seven-day data accumulation week. Price is the price per pound for produce sold by weight, price per item for produce sold by count, and price per package for standardized weights and counts.

Quantity is measured as item movement, which is the number of times the scanners read the respective code. Item movement is considered to be a proxy for units sold, assuming there is little variation in the distributions of weights/counts sold from week to week. Customer counts are the number of times the register drawers are opened. Item movement was converted into item movement per thousand customers.

Altogether, 410 weeks were included. But there were three weeks for which technical difficulties led to no data transfer from any of the five stores to the corporate management information system. There were also a few instances where the item movement per thousand customers data were at least three times their standard errors and were considered to be outliers.

The length of the series provides the opportunity to examine long-run trends, seasonality, and the effects of new produce introductions. The case in point is carrots. At the start of the period, they were for sale in bunches wrapped in plastic or banded together. Altogether, 49 fresh carrot bar codes were used by the chain over the entire time period. The large number is due to the use of the chain's own codes prior to the introduction of standardized fresh produce codes. Produce descriptions associated with each bar code were used to separate carrots into regular (traditional forms in which fresh carrots are sold), precut, and organic. Changes in fresh produce bar codes occurred at approximately the same time precut carrots were introduced. This resulted in an erratic capture of fresh produce price and item movement data for several weeks while errors in the software were eliminated. As described below, fresh carrots stabilized by April, 1993. Organic sales started with the week ending January 28, 1995.

Item movement per thousand customers and average prices were created for each subgroup. The weekly item moments by bar code were added together across reporting stores and divided by the customer counts of the reporting stores. These were then aggregated by subgroup to obtain carrot sales per thousand customers for regular, precut, and organic. Average prices are weekly weighted averages where the weights are the item movements for the codes included in each carrot type.

Descriptive statistics for the item movement and price series are displayed in Table 1. Notice that average item movement was highest for precut, followed closely by regular. Organic's comprised a very small market share, on average. Coefficients of variation for the three-item movement series indicate that regular had the largest relative variability, precut was second, and organic was third. With respect to average prices, organic was the most expensive. Precut was 40 cents cheaper on average, and regular prices were 43 cents lower than precut's. The precut price series had the highest relative variation, while precut's and organic's were similar.

Table 1
Summary Statistics for Item Movements and Prices

	Number of Weeks	Mean	Standard Deviation	Coefficient Variation
Item Movement				
Regular	400	26.52	18.57	70.04
Precut	216	30.05	15.19	50.54
Organic	55	3.82	1.67	43.67
Price				
Regular	400	.91	.12	12.70
Precut	216	1.34	.29	21.83
Organic	55	1.74	.28	11.85

Pairwise correlations are presented in Table 2. A fairly high degree of substitution is suggested by the negative item movement correlation between regular and precut (-.69). The extent of possible substitution appears to be much smaller between regular and organic item movements. Precut/organic's positive item movement correlation is an indication that both increased relative to regular.

Inspection of the three price correlations reveals that the largest in absolute value is between organic and precut for which approximately two-thirds of the time these two series are changing in the opposite direction. The positive price correlation between regular and precut indicates a tendency for these retail prices to change in the same direction. Regular and organic prices seem to be independent.

Price/item movement (quantity) correlations are in the bottom third of the table. Regular's negative own-price correlation is consistent with demand theory. The small negative own-price correlation for organic suggests a fairly independent relationship between these two series. It is consistent with those food shoppers who purchased this type of fresh produce being willing to pay a high premium over regular and precut. Nonprice considerations are affecting these consumers. The positive precut own price/item movement correlation reflects the product life cycle marketing strategy of introducing a product at a lower price and then gradually raising it as sales increase.

Table 2
Correlations by Package Type

	Item Movement		
Item Movement	Regular	Precut	Organic
Regular	1.00		
Precut	-.69	1.00	
Organic	-.19	.55	1.00

	Price		
Price	Regular	Precut	Organic
Regular	1.00		
Precut	.30	1.00	
Organic	-.05	-.64	1.00

	Item Movement		
Price	Regular	Precut	Organic
Regular	-.35	.14	-.19
Precut	-.69	.60	.17
Organic	.33	.10	-.03

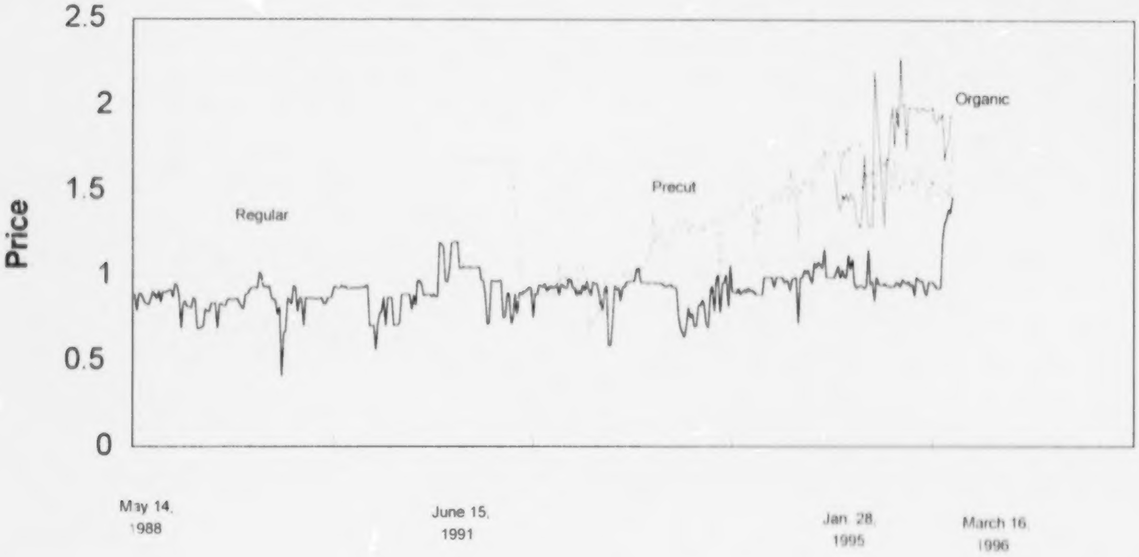

Figure 1
Average Carrot Prices by Type

Regular carrot prices remained relatively stable over the entire period, with weekly prices fluctuating around a horizontal line (see Figure 1). Both precut and organic prices were initially set at high levels for a few weeks and then were lowered. After being at relatively low levels for a few weeks, the prices of each increased.

A seasonal pattern is visible in regular carrot sales per thousand customers (see Figure 2). Prior to the introduction of precut, regular item movement seemed to fluctuate around a horizontal line. Soon after the time precut became available, the chain started to implement changes in its bar code scheme for fresh vegetables and departmental designations, which resulted in an erratic and unreliable record of sales noticeable in the weeks following July, 1991. Substitution of precut for regular carrots is quite apparent, and regular item movement declined to the point where it is comparable to organic's. It should be noted that inspection of newspaper, television, and radio advertising for January, the seasonal high, revealed that only regular carrots were promoted, and this occurred in only four weeks, which were in different years.

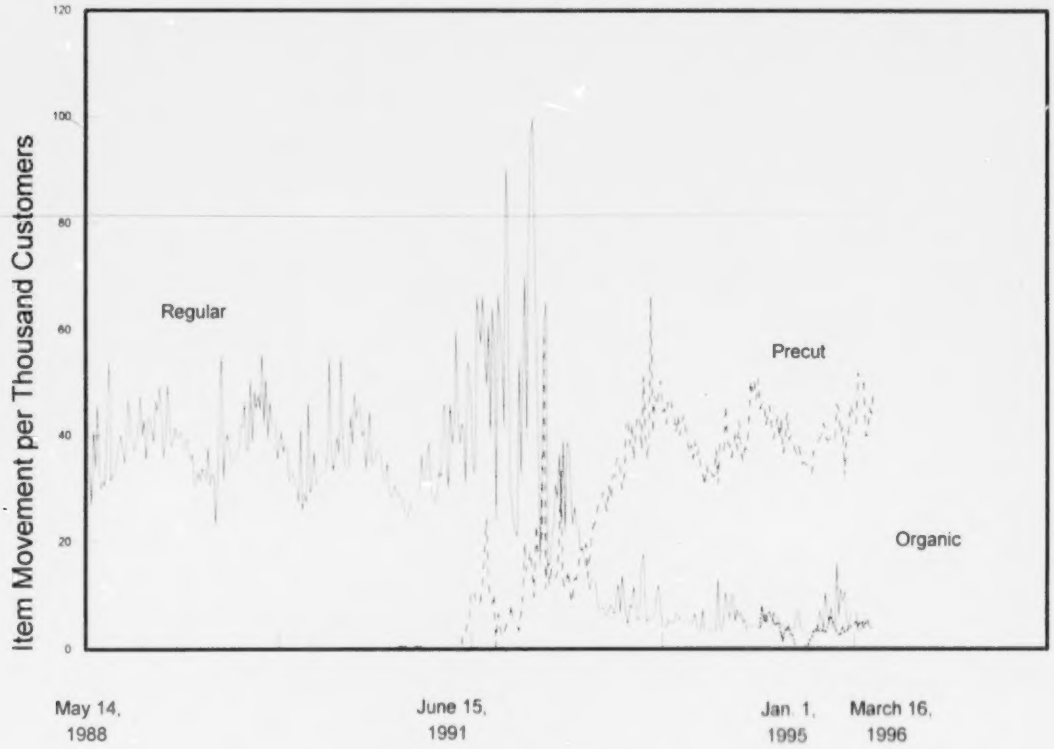

Figure 2
Carrot Sales Per Thousand Customers by Type

Precut carrot item movement started off at very low levels and then increased somewhat with the first price reduction. The second time prices were lowered (fall, 1991) consumer acceptance started to increase dramatically, and at the expense of regular. The cyclical pattern present in the regular series prior to June 15, 1991 became visible in precut starting in the fall of 1992.

Modeling a New Product Introduction

Two basic approaches to modeling a new product introduction combined with a cyclical pattern were explored. One was spectral analysis. However, the empirical results in the case of precut carrots were inferior in terms of overall fit and estimated parameters to those obtained from the spline function presented below.

The subperiod used in the analysis began with the week ending May 8, 1993. This was based on the date precut carrots were introduced, and on the erratic observations associated with the weeks during which the chain was switched its fresh produce bar codes and departmental designations. Consequently, the regression analysis coincides with the time the chain had the lowered the initial price, and sales were beginning to grow. (With respect to Figure 2, it is close to where the precut and regular curves cross.) This is May 8, 1993.

Choice of the functional form was motivated by an analysis of scatter plots. Notice that the cyclical pattern in precut item movement per thousand customers in Figure 2 is with respect to time. Plots with respect to the price of regular (Preg) and the price of precut (Ppre) (not shown) revealed no cyclical patterns. An implication is that the estimation of the spline function with four knots is with respect to time, as opposed to either price.

Organic prices were not included for three reasons. First, organic carrots were introduced toward the end of the period. Second, they comprised a very small segment of the fresh carrot market. Third, the organic price correlation with precut item movement was very low. The last two points suggested that there was no omitted variable bias.

Several outliers are visible in Figure 2. These are not associated with holidays or special promotions. Rather than deleting these observations, dummy variables were used because the objective was to include as many observations as possible, but at the same time minimize the effects of these outliers on the overall fit. The approach is justified because outliers can induce serial correlation among the errors (Pindyck and Rubinfeld, 1997). Altogether, there were eight outliers. Each is identified in Table 3, along with the identification of the knots (described below). This methodology is also consistent with interest in the general pattern of consumer acceptance of the new product.

Spline functions provide flexibility to allow for cyclical patterns. They are piecewise polynomials. At the join points (knots) the derivative may be continuous or discontinuous (Smith 1979). Truncated polynomials are used to estimate the various segments, and alternative continuity restrictions can be imposed at the knots. Figure 2 identifies the knots. There are four, determined by the peaks and troughs observed in the precut series during the subperiod. The functional form can be specified to allow for sequential testing of the continuity restrictions.

Table 3
Dates of the Knots and Outliers

Knots		Outliers	
Date	Variable	Date	Variable
Jan. 29, 1994	K1	July 9, 1993	T1
July 9, 1994	K2	Sept. 11, 1993	T2
Jan. 21, 1995	K3	Nov. 27, 1993	T3
Aug. 8, 1995	K4	Dec. 11, 1993	T4
		Nov. 26, 1994	T5
		Dec. 24, 1994	T6
		Dec. 2, 1995	T7
		Jan. 6, 1996	T8

Choice of the functional form was motivated by the scatter plot, and it is also consistent with the typical relationship associated with new product introductions. The log of precut item movement per thousand customers (IM) is a function of precut and regular prices, and number of precut package types, and a second degree time polynomial for each of the segments of the cycles. NPRE is the number bar codes (types of precut packages vary by processor and size), and it fluctuated between six and nine, although for most weeks it was seven. Consequently, NPRE is the number of precut packages minus seven, so NPRE ranged between minus one and two to allow for the possibility that consumers may have developed an expectation with respect to variety in terms of precut package sizes available.

Fitting a second degree spline function entails incorporation of a set of dummy variables to allow for changes in the constant and changes in the first and second derivatives at the knots. Given the four knots, time, and time squared variables can be constructed. Dummy variables were set equal to zero until the time the respective knot is reached and then set equal to one thereafter. Time and time squared variables are calculated as each dummy variable multiplied by the difference between the observation number and the observation number for the knot. This procedure resulted in an initial regression that had time (T), time squared (TSQ), four knot segment intercept terms (D#), four knot segment time terms (DT#), four knot segment time squared variables (DTSQ#), and Preg, PPRE, and NPRE. Variables which had insignificant coefficients were deleted, and the re-estimated equation was compared to the initial estimates to make sure that there were no large changes in estimated coefficients, their standard errors, or measures of overall fit. The resulting equation is presented below (standard errors in parentheses, and * denotes significance at .05 level).

Interpretation of the time coefficients is as follows. Absence of D1, D2, and D3 variables (changes in the intercepts at the knots) suggests that at each of the first three knots the first partial derivative with respect to time was continuous, or the lnPRE function was smooth. However, at the fourth knot, there was a shift in the curve with respect to time. Only two squared terms had significant coefficients: TSQ and DTSQ2, which means that the second partial derivatives of lnPRE with respect to time are continuous at the first, third, and fourth knots.

$$\begin{aligned} \ln PRE = {} & \underset{(.131)}{3.439^*} + \underset{(.002)}{.049T^*} - \underset{(.0001)}{.001TSQ^*} + \underset{(.038)}{.121D4^*} + \underset{(.004)}{.039DT2^*} - \underset{(.008)}{.039DT3^*} + \underset{(.007)}{.013DT4^*} \\ & + \underset{(.001)}{.001DTSQ2^*} + \underset{(.074)}{.118T1} - \underset{(.073)}{.189T2^*} + \underset{(.073)}{.181T3^*} - \underset{(.075)}{.207T4^*} - \underset{(.073)}{.160T5^*} \\ & + \underset{(.075)}{.192T6^*} - \underset{(.075)}{.258T7^*} - \underset{(.074)}{.563T8^*} - \underset{(.090)}{.248Ppre^*} - \underset{(.077)}{.226Preg^*} - \underset{(.012)}{.011NPRE} \end{aligned}$$

$F = 57.839^*$, $R^2 = .89$, $DW = 1.58$

PRE's coefficient is negative and significant even though the simple correlation between precut's price and own item movement is positive. An interpretation is that the time variables in the spline function allow for the estimation of the new product introduction and cyclical effects, while the price variables can be used to estimate price responses. The negative coefficient for PREG is a complementary relationship because this variable and precut item movement per thousand customers change in the opposite direction. That is, they have a competing relationship. An interpretation is that consumers may have a budget allocation system in which a predetermined dollar amount is to be spent on carrots, either precut or regular, and as the price of regular increases, these consumers can purchase less of both, ceteris paribus.

Price elasticities are presented in Table 4. They are calculated for the average prices associated with the line segments found in Figure 2 given the significant knots. Thus, there are four subgroups, as noted in the table and overall elasticities. The own price elasticities become less inelastic over the first three segments, due to a rising precut price. For the last segment, the average precut price fell, leading to a small change in the elasticity. The interpretation is that food shoppers appear to have become somewhat more price sensitive over time as the chain raised precut prices. The cross-price elasticity does not change very much because the average price for each segment did not change very much, although there was price variability in within each subperiod.

Table 4
Estimated Elasticities

Line Segment	Elasticity	
	Precut	Regular
May 8, 1993-July 2, 1994	-.328	-.200
July 9, 1994-Jan. 14, 1995-	.387	-.222
Jan. 21, 1995-Aug. 1, 1995	-.418	-.222
Aug. 8, 1995-Mar. 16, 1996	-.382	-.232
May 8, 1993-Mar. 16, 1996	-.368	-.216

Implications

Store level supermarket scan data provide insights regarding a chain's pricing behavior during the introduction of a new produce for which there is a close substitute and regarding consumers' purchases of a new type of convenience/health food. Experience properties of foods point to a need to get people to try products. The chain, with respect to precut carrots, accomplished this by initially selling them at a low price and then gradually raising it as sales increased.

Food shoppers responded positively. Not only did precut item movement grow, but consumers have substituted precut for regular carrots. The initial growth phase is consistent with the stylized product life cycle in which successful introductions are characterized by sales that increase at a decreasing rate up to the first knot in the spline function. The extent of substitution for regular carrots resulted in the cyclical pattern, observed in regular sales prior to precut's introduction, being found in precut item movement following the initial growth period.

Estimated own and cross elasticities indicate that along with the price increase, the demand gradually became less inelastic and that food shoppers appear to be somewhat more responsive with respect to carrots to precut prices (which are higher) than to regular prices. An interpretation is that food shoppers feel the convenience and preparation time saved are worth the existing price difference, but further increases in precut's price could have an adverse impact on precut sales.

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Endnotes

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Noncustodial Fathers Who Pay Supplemental Support for Their Children After Divorce

This study examined the relationship between supplemental financial support provided by noncustodial fathers and amount of contact with children; level of involvement; frequency of discussions and frequency of conflict with former spouse; level of financial satisfaction; percentage of children's expenses they think child support covers; and extent to which they feel former spouse is paying her share of children's expenses. Multiple regression analysis revealed that involvement with children was the only variable related to supplementary financial support.

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Introduction

Fully one-third of the $17.7 billion in child support due in 1991 was not paid (U.S. Census Bureau, 1997). Divorced men who fail to pay child support have received media and legislative attention, yet little is known about the nature and extent of their supplemental financial contributions to their children. Almost all studies on the economics of divorce and child support have relied on data collected from custodial mothers (Seltzer, Schaeffer, & Charng, 1989; Scoon-Rogers & Lester, 1995; U.S. Bureau of the Census, 1991).

In an era when noncustodial fathers are commonly associated with the label "deadbeat dads," this study focuses on the prospects for encouraging fathers who meet their child support obligation to contribute additional financial resources to compensate for inadequate support awards. While child support enforcement laws are necessary, this study explores ways to encourage more voluntary support from responsible noncustodial fathers.

Purpose of the Study

The purpose of this study was to examine the relationship of the amount of supplemental financial support provided by noncustodial fathers and (a) their contact with their children; (b) their involvement with their children; (c) coparental interaction with their former spouse about decisions concerning their children; (d) conflict with their former spouse; (e) satisfaction with their finances, (f) percentage of children's expenses they think child support covers; and (g) extent to which their former spouse is paying her fair share of children's expenses.

Review of Literature

A paucity of literature addresses the supplementary financial contributions of noncustodial fathers to their children. Studies identified categories of supplemental financial and in-kind assistance that nonresident fathers provided and some of the factors that encouraged fathers to provide financial or in-kind assistance, such as contact with the children through visitation and continued parental involvement (Pearson and Thoennes, 1988; Haskins, 1988; Teachman, 1991).

Haskins' (1988) study of low-income Black fathers in North Carolina provides the only data on supplementary support from minority noncustodial fathers. The kinds of assistance included cash gifts, paying bills, and providing the mother or children with clothing or other gifts. Using data from custodial mothers in the National Longitudinal Study of the High School Class of 1972, Teachman (1991) concluded that, other than paying child support and buying gifts, the majority of fathers never made contributions of supplemental financial assistance to their children. Lown (1994) reported that 94.2% of a sample of noncustodial fathers reported that in addition to child support they paid for clothing, toys and gifts.

Pearson and Thoennes (1988) concluded that one of the most critical variables predicting the provision of supplemental financial support and in-kind contributions was the amount of contact noncustodial fathers had with their children. Teachman (1991) also found a positive correlation between the amount of visitation and supplemental financial

149

support. How frequently fathers visited their children was intertwined with their feelings about the visits. The more dissatisfied fathers were with the length and frequency of their visits, the less they actually saw their children (Arditti, 1992).

In addition to the amount of contact noncustodial fathers had with their children, fathers' involvement in the daily activities of their children's lives such as helping with homework; transporting children to friends; and attending school events increased the amounts of supplemental financial support noncustodial fathers provided (Pearson & Thoennes, 1988; Teachman, 1991).

Arditti and Kelly (1994) found that a more friendly and supportive coparental relationship between former spouses resulted in increased discussions about child rearing. Coparental interaction appears to have an important role in determining visitation patterns and noncustodial fathers' satisfaction with custody arrangements (Ahrons, 1983; Ahrons & Miller, 1993; Arditti & Kelly, 1994; Seltzer, 1991). Fathers with cooperative interactions with former spouses were more satisfied with custody arrangements and property settlement (Arditti and Kelly, 1994).

The co-parental relationship is important in predicting whether assistance is provided; fathers who enjoyed a friendlier relationship with their former spouse, who have visitation rights, and who have joint custody provide more financial contributions (Teachman, 1991). Conflict with the former spouse reduces the amount of time fathers spend with their children as well as the number of visits (Ahrons, 1983; Ahrons & Miller, 1993; Seltzer, 1991; Wallerstein & Kelly, 1980).

Noncustodial fathers identified finances as their most troublesome problem following divorce (Coney & Mackey, 1989). In spite of research indicating that divorced fathers are better off financially than their former spouses and that their financial situation usually improves after divorce (Fletcher, 1989; Rowe & Lown, 1990), noncustodial fathers perceive themselves as worse off financially.

Child support comprised 17 percent of total money income received by custodial mothers receiving child support in 1991 (U.S. Bureau of the Census, 1997). Child support payments were 34% of the total money income of poor mothers compared with 15 % of non-poor mothers. The average child support amount received by custodial mothers receiving full or partial payments in 1991 was $3,011; the mean child support payment received by poor women was $1922.

Conceptual Framework

The conceptual framework for this study combines Ahrons' binuclear family model with social exchange theory (Homans, 1974). Ahrons (1983) developed the concept of the binuclear family as a more complicated family system rather than one that dissolves upon divorce. Social exchange theory asserts that people calculate costs and benefits in social transactions and will consider their perceptions of available alternatives when assessing costs and benefits. Exchanges that payoff influence patterns of social interactions. Exchange relationships reflect underlying patterns of social organization and thus create and reinforce normative structures of society Sabatelli & Shehan (1993).

Hypothesis

The hypothesis tested in this study is that noncustodial fathers who are involved with their children; able to interact with their former spouses without high levels of conflict; and satisfied with their finances will provide more supplemental financial support, in addition to court-mandated child support, to their children.

Methods

Sample

The sample consisted of 236 mostly Caucasian noncustodial fathers ranging from 22 to 61 years old. All had been divorced only once, and had between one and seven dependent children, ranging in age from under five years old to 18 years or older. Seventeen percent of the sample reported having only one child, 29% had two children, 18% had three children, 22% had four children, 6% had five children, 3% had six children, one father reported seven children.

Most of the sample reported some college education. Median income for 1993 was $30,000 - $39,999. All of the fathers in the sample were required to pay child support; the mean amount was $521/month in total. Ninety-two percent of the fathers reported that they had always paid child support during the previous year.

Procedure

In 1994, surveys were sent to a random sample of 500 noncustodial fathers, divorced during 1992, drawn from vital statistics records of a western state. The survey instrument and data collection followed a modified version of the Dillman (1978) Total Design Method.

Multiple linear regression analysis was used to assess the relationship between the amount of supplemental financial support (the dependent variable) and the independent variables amount of contact with the children, involvement with children, coparental interaction, conflict with the former spouse, satisfaction with finances, the noncustodial father's perception of the percentage of the children's expenses that are covered by child support, and the noncustodial father's perception of the extent to which the former spouse is paying her fair share of the children's expenses. A probability level of .05 was selected for statistical significance.

Variables and Data Transformation

Dependent Variable. The dependent variable, the annual amount of supplemental financial support paid by noncustodial fathers for expenses of their children, is measured for six categories of expenses. These include health and/or dental insurance or uninsured expenses; education expenses (school fees, private school tuition); children's entertainment; children's food; clothing; and toys, and gifts for the children.

Respondents were asked whether or not they paid for each of the four categories of expenses making up the variable "supplemental financial support" during the previous year. The categories representing the dollar ranges for each of the expenses were assigned a dollar value representing the midpoint of the dollar range. Responses of 1 (less than $100) were assigned a value of $50; 2 ($100 to $299) a value of $150; 3 ($300 to $599) a value of $450; 4 ($600 to $899) a value of $750; and 5 ($900 or more) a value of $950. Using this transformation resulted in the dependent variable, supplemental financial support, having a possible range of $0 to $3800.

Independent Variables. Contact with children is an estimate made by the noncustodial father of a) the average number of times he talked to his children on the phone, b) the average number of times he saw his children, and c) approximately how many nights the children stayed overnight with him during the previous year. To arrive at the average number of times the noncustodial father talked to his children on the phone and saw his children in the past year, each category was assigned a numerical value as follows: never = 0; less than once a month = 6; once a month = 12; twice a month = 24; once a week or more = 52. The transformation resulted in a range of zero to fifty-two for the number of times the noncustodial father talked on the phone with the children in the past year and a range of zero to fifty-two for the number of times he saw his children in the past year.

To determine how many nights during the past year the children stayed overnight, fathers responded (1) none; (2) one to ten; (3) eleven to twenty; (4) twenty-one to thirty; (5) thirty-one to forty; and (6) more than forty. Fathers responses were assigned a numerical value representing the midpoint value of the category; the category "more than 40" was assigned the value 45.

The variables involvement with children, coparental interaction, conflict with former spouse, and satisfaction with economic well-being are additive indexes measured as 5-point Likert scales. In each case, the variable is assigned a score representing the mean of the additive value of the responses to the questions in the scale. Each scale has a possible range of scores from 1 (not at all) to 5 (very much).

Involvement with children is a fourteen-item 5-point Likert scale developed by Ahrons and Wallisch (1987) to measures how involved noncustodial fathers are with their children on a day-to-day basis. Coparental interaction is scored as the mean of the additive total of the 5-point Likert coparental interaction scale. The scale has a possible range of 1 (never) to 5 (always). The scale (Ahrons & Wallisch,1987) consists of ten questions father about the frequency of discussions with his former spouse of topics such as day-to-day decisions and major decisions regarding the children's lives. The conflict scale (Ahrons & Wallisch,1987) consists of four questions in a five-point Likert scale regarding how often a noncustodial father's interactions with his former spouse result in conflict. Satisfaction with economic well-being is also measured as a 5-point Likert scale. The original scale (Berger, Powell, & Cook, 1988) consisted of six questions concerning satisfaction with finances. A seventh item, satisfaction with their overall financial situation, was added.

Results

The hypothesis tested in this study was that noncustodial fathers who are involved with their children; interact with their former spouses without a lot of conflict; and who are satisfied with their finances will provide more supplemental financial support to their children.

Table 1
Intercorrelations and Coefficient Alpha Reliability Estimates

	Intercorrelations							
Variable	**Y**	**X_1**	**X_2**	**X_3**	**X_4**	**X_5**	**X_6**	**X_7**
Y Supplemental support								
X_1 Contact children	.34***							
X_2 Involvement with childern	.37***	.58***	(.95)					
X_3 Conflict former spouse	.00	-.10	-.07	(.89)				
X_4 Coparental interaction	.23***	.45***	.53***	-.45***	(.95)			
X_5 Financial satisfaction	.14*	.21**	.22**	-.11	.15*	(.91)		
X_6 Expenses child support pays	.18**	.02	.07	.10	-.02	.23***		
X_7 Mother's share of expenses	-.04	.01	-.01	-.30***	.30***	-.10	-.30 ***	---- -

Note. N = 236. Reliability estimates appear in parentheses on the diagonal.
*p < .05, two-tailed. **p < .01, two-tailed. ***p < .001, two-tailed.

Table 2
Means and Standard Deviations

Variable	**M**	**SD**
Y Supplemental Support	2101.32	1192.65
X_1 Contact with children	101.88	40.13
X_2 Involvement with children	3.07	0.98
X_3 Conflict with former spouse	3.16	1.05
X_4 Coparental interaction	2.53	1.02
X_5 Financial satisfaction	2.60	0.91
X_6 Expenses child support pays	74.35	25.25
X_7 Mother's share of expenses	0.44	0.50

Note. N = 236.

Consistent with Peterson and Nord (1990) and Teachman (1991), only involvement with children was statistically significant in predicting the amount of supplementary financial support provided by noncustodial fathers, most of whom were paying child support as mandated. Using OLS regression (enter method) only contact (.0479) and involvement (.0072) were significant.

Table 3

Summary of Regression Analysis for Variables Predicting Supplemental Support (n = 173)

Variable	**B**	**SE B**	β
X_1 Contact with children	4.44	2.98	.14
X_2 Involvement with children	325.27	124.41	.26*
X_3 Conflict with former spouse	31.99	97.34	.03
X_4 Coparental Interaction	41.78	125.43	.04
X_5 Financial satisfaction	36.75	97.08	.03
X_6 Expenses paid by child support	1.81	3.70	.04
X_7 Mother's share of expenses	-39.35	201.00	-.02
(Constant)	340.30	609.05	

Note. $R^2 = .16$; Adjusted $R^2 = .12$ *$p < .01$, two-tailed.
$F = 4.33\ (7, 165)$. $p < .0002$

Next, the variables were entered in a stepwise multiple regression which yielded a Beta of 460.33 (B = 460.33, SE B =88.52, T = 5.20, Sig T =.000). Multiple R = .37 and R squared = .137 indicating that involvement with children accounted for 13.7% of the variance in the supplemental support variable.

Discussion

There are obvious limitations to this research. The convenience sample is not representative of noncustodial fathers but does represent a group that is more responsible and willing and able to provide additional support. The study was limited to previously married fathers and thus excluded the growing number of never married fathers who split from their child's mother. By studying those noncustodial fathers who have the potential to make substantial financial contributions above and beyond child support this study provides confirmation the the involvement with their children is a critical factor.

Results are consistent with previous studies that indicated that contact with children was the most significant in paying court-mandated child support and for supplementary cash and in-kind support. Thus practitioners who work with families contemplating divorce, in process and shortly after the divorce decree should emphasize the importance of continued involvement of the non-custodial parent. This recommendation assumes the absence of contrary indicators such as physical or sexual abuse, or substance abuse. While joint legal custody is the norm after divorce, most children continue to spend most of their time with the custodial mother. The financial well-being of the children can be enhanced when noncustodial fathers, who typically have greater financial resources, are encouraged to become more involved with their children after parental divorce.

Conclusions and Recommendations

The findings from this study are important because we know so little about noncustodial fathers and there is a need to increase financial support for children of divorce. Previous research indicates that financial support is linked to contact with children.

In many respects the respondents were not representative of the population of noncustodial fathers. Since data were collected via a ten-page mailed survey, subjects whose primary language is not English and who were less educated were less likely to respond. Many did not receive the survey because they had moved repeatedly since the divorce or had no permanent address. Further, noncustodial fathers whose child support payments were in arrears were be less likely to respond. While national data sets can provide representative data, they fail to contain the wealth of information available from detailed surveys. The philosophy behind the Noncustodial Fathers Project is that there is much to be learned from responsible noncustodial fathers, a neglected group.

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Endnotes

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Characteristic Philosophies of Families Toward Time Resource Use: A Combined Factor and Cluster Method

Using combined factor and cluster analyses, the feasibility of categorizing families by characteristic philosophies, vis-a-vis concordance between their reported weekly time use choices and resulting satisfactions, was investigated. Results suggest some families might function using ingrained behaviors that are inefficient, i.e. not utility maximizing, in producing life satisfaction. Observed family philosophy differences existed that were not easily attributable to ready demographics such as gender, marital status, number of children, and, somewhat less, paid employment.

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Background

The New Home Economics (NHE) model promoted by Becker holds that families maximize their utility through consuming household goods and services produced from market and time resources subject to a full income constraint and economically rational behavior (Becker, 1981). Family processes are viewed as a consistent function acting on a vector of resources essentially with demand for each resource observable holding other inputs constant. Further, Becker proposed that a single decision making head of household acts as an altruist toward the other family members who in turn find it in their best economic interests to abide by his/her decisions. Thus, families always maximize their joint utility rather than their individual utilities.

Empirically, considerable research has been conducted to identify factors that determine the demand for time use allocation by families in contemporary American culture. Studies include Nickols and Metzen (1978), Coverman (1985), Sanik and Mauldin (1986), Ross (1987), Kamo (1988), Goldscheider and Waite (1991), Brayfield (1992), Demo and Acock (1992), Bryant (1992), Lennon and Rosenfeld (1994), Zick and Bryant (1994), Dannerbeck (1995), and Bryant and Zick (1996). The models in most studies reflect NHE theory regarding families' market and non-market time allocation decisions, especially female's employment decisions and division of housework (Key & Firebaugh, 1989). Varying reasons have been proposed for the observed distributions of time uses including household specialization efficiency, relative power and relationship domination, traditional versus egalitarian values, opportunity costs of labor, demographic differences, and household demands relative to response capabilities.

Most researchers have operationalized their empirical models by determining the impacts of exogenous variables separately, content to hold the remaining variables analytically constant at their average values. Variables such as family resources and demographics typically are entered into the model as main effects, though occasionally a limited set of interactions is included. The inconsistent results across these studies suggest, however, that these models are not completely specified. Estimated impacts appear to be sensitive to the families' cultural and behavioral contexts as well as to what combinations of explanatory variables are included and their form.

Characteristic Philosophies of Families

What is missing from Becker's theoretical construct and these studies is a model that captures more of the gestalt, the larger picture, of each family's dynamic. Zick (1992) restates a continuing criticism of Becker's model requirement that family members work in concert, that there is a common effort by all other family members to maximize the income and, thus, the utility of the head of the household. However, in contemporary culture, family members seldom hold things constant. Family's decisions often emanate from divergent demands. A "family outcome" may be more an artifact of the imposed sampling unit than a reality. Families can operate much like a geological aggregate composed of different sized particles, when thrown it goes in one direction but it shatters upon striking the target. As such, the expected joint utility of a family decision can be quite different from the realized utility.

An alternative model to New Home Economics called the Family Resource Management model (FRM) allows households to make decisions and manage their resources through family processes that develop tastes and preferences, assess the validity of information on resources and action options, select action plans, control quality, and learn (Key

& Firebaugh, 1989). Further, this paradigm allows the possibility that these processes may be inherently biased and result in some families operating less effectively than others despite the known institutional parameters. Family therapists have suggested for decades that families may form around a characteristic affective behavior, a philosophy of life, resulting in different outcomes across similar demographics (e.g. Constantine, 1986).

Whether by choice, genetics, or authority the behaviors of individuals in a family tend to form a complex, integrated dynamic, though not necessarily a "nice" one in the Beckerian sense. Further these signature dynamics may be like habits and, once formed, remain a dominant guiding force despite their actual effectiveness on enhancing a family's decision outcomes. So, it is possible that estimating general family impacts of separate explanatory variables may not be as meaningful as understanding the same impacts within the context of families' characteristic patterns of these resources and attributes and may miss important elements of household decision making. Time use patterns may be determined by numerous factors with a complex causal structure. Zick (1992) called for challenging traditional theoretical assumptions and building new models of family decision making.

Unfortunately, current data sets on family time use generally possess insufficient information to allow researchers to directly categorize family processes. Some researchers, attempting to type families by different family demographics such as their physical, legal, or employment family structures only met with moderate success (e.g. Sanik & Mauldin, 1986), Zick and Bryant, 1994), and Bryant & Zick, 1996). Seemingly in this spirit, Zick (1992) also stressed the need for family researchers to expand and improve on the types of data collected.

Avery, Bryant, Douthitt, & McCullough, (1996) have further recommended that the focus of future research "be on whether the way people use their time is important in determining their own and their household's welfare." The current research examines the feasibility of identifying distinct family philosophies indirectly vis-a-vis family heads of households' reported unpaid time use allocations and their concomitant satisfactions with these choices through combining factor and cluster analyses. The objectives are to identify patterns of heads of households' unpaid time uses and time use domain attitudes using factor analyses, identify groupings of families within distinct time use and attitude patterns using cluster analysis, and qualitatively assess the resulting clusters to determine the viability of associating the groups with characteristic family philosophies.

Interpretable clusters would suggest that characteristic philosophies and methods of operation may exist across families. While this will not say conclusively that some families don't always obey the maximization assumption it can suggest that characteristic household dynamics exist and that further study needs to be conducted on their differential impact on family decisions and outcomes.

Time Use Dataset

In the Spring and Fall of 1994, the Department of Consumer and Family Economics (CFE) at the University of Missouri-Columbia surveyed the time use patterns of local families with at least one 5th grade child, resident or non-resident in the home (Dannerbeck, 1995). The original goal of the Columbia Time Use Survey was to explore the level of authority and responsibility sharing arrangements within families with school-age children and their level of life satisfaction. CFE sent two questionnaires to each household. Forms were independently filled out by each resident parent and 569 responders sent back usable forms. Medical, academic, and insurance professional paid work classifications dominated respondents' work situations.

Table 1
Example of Detailed Attitude Question For Time Use Domains

Please rate your EFFECTIVENESS in each role using the following scale (leave blank for spouse/partner if none at present):

1 VERY POOR
2 POOR
3 A BIT BELOW AVERAGE
4 AVERAGE
5 A BIT ABOVE AVERAGE
6 VERY GOOD
7 EXCELLENT

1. ____ Parent
2. ____ Spouse/Partner
3. ____ Member of Your Extended Family

Information was collected on family structure, division of household responsibilities, personal respondent information, paid work time use, unpaid time use, and attitudes/perceptions about the family's uses of its time and satisfaction with this allocation. Paid work, unpaid time, and attitudes and perceptions responses covered pre-selected domains of potential time use by the respondents: parent or child, spouse or partner, extended family, friends, recreation or social life, job, home, community.

Most attitude and perception questions required five- or seven-point Likert-type scale responses for up to nine time use categories (e.g., Table 1). One set of questions focused on Actual vs. Desired Time, Paid Work Effects, and Satisfaction with time use domains. Another set investigated the Importance of and Effectiveness in different family roles. Role Importance asked respondents to rate the importance to themselves of different family roles.

Combining Factor and Cluster Analyses

Of the survey's potential variables, inspection narrowed the usable set to forty-six domain-specific variables across five questions involving unpaid time and attitudes toward different domain satisfaction aspects. However, two analysis problems were clear. The questions themselves were related. Further, the responses across time use domains subsetting a question response appeared to be highly correlated. Thus factor analysis was deemed appropriate to condense this data set into a few composite factors (see MacDonald & Douthitt, 1992).

Factor analyses were run on the time use categories (variables) within the listing of unpaid time spent by category and four of the attitude questions (Concordance of Actual vs. Desired Time spent on a Domain, Paid Work Effects, General Satisfaction within a Domain, and Role Effectiveness). Final analyses used a PROMAX method and scaled factors were standardized to mean zero and standard deviation of one. Further, the dataset was divided into married and not married for factor analysis.

Similarly interpretable factors were subsequently analyzed together using an oblique rotation. This procedure resulted in being able to reduce, for married responders, the attitude domain responses from 35 highly collinear variables to nine relatively independent and easily interpretable variables (see Table 2). Unpaid time variables were similarly reduced from eleven to three.

Table 2
Reduced Variable Set For Unpaid Time & Attitudes/Perceptions

Variable	Interpretation
Hr Child Evnt	Hours Spent with Children's Events
Hr Prsnl/Soc	Hours Spent for Personal/Social Development
Hr Imm Fam	Hours Spent with Immediate Family (excl.Hr Child Evnt)
Sat Par-Chld	Satisfaction with Parent-Children Relations
Sat Xtd Fam	Satisfaction with Extended Family
Sat Soc	Satisfaction with Social Life
Sat Gen/Job	Satisfaction - General (married) or Job (not married)
Paid Wrk Effct	Positive Effect of Work on All Time Use Domains
Cncrd Par-Chld	Concordance of Actual v. Desired Time for Parent-Child Relations
Cncrd Pub Life	Concordance of Actual v. Desired Time for Public Life
Cncrd Persl Life	Concordance of Actual v. Desired Time for Personal Life
Cncrd Cmmty Life	Concordance of Actual v. Desired Time for Community & Social Life

With two exceptions, the minimum eigenvalues acceptable for the attitude variables were set above their average rather than "1" to capture a robust set of factors for aggregating moderately heterogeneous households. Minimum eigenvalue criteria for the new Concordance and Work Effect factor groups, however, were set below the average to include two extra factors. This solution possessed a much clearer interpretation, possibly due to Work Effect capturing so much of the variability that it had masked other potentially meaningful factors.

A cluster analysis on these new scaled factors was then performed to identify logical groups of respondents. Clustering was performed on both the married and not married data by matching factor interpretations. This worked well for all except the General Life Satisfaction factor for marrieds versus the Job Satisfaction factor for not marrieds. However, these two were eventually merged under the assumption that, due to their situation, single parents may base a General Satisfaction attitude on the economic and personal reward aspects of their jobs. That is, single parents are often forced to sacrifice leisure time for income, thus their general life satisfaction might be reduced to measuring how well s/he provides economically for the family.

Ward's minimum variance method was chosen for the clustering algorithm. This method fits the idea that logical clusters should minimize the variance of respondents across their patterns of both unpaid time use and attitudes. A dendrogram indicated both the five and the three cluster solutions. However, inspection of the vertical distances (SPRSQ) and sizes of the clusters (CL1=184, CL2=318, CL3=67) resulted in choosing to characterize only the three cluster solution.

This analysis was performed on individual respondents, so the degree to which the spouses from the same family were clustered together (cluster agreement) was examined. Of the 190 households for which both spouses responded, 46% had perfect cluster agreement (Table 3). As discussed later, however, only 18% (12% of the entire sample) showed serious disagreement by having one spouse placed in Cluster 1 or 2 while the other spouse fell into Cluster 3.

Table 3
Cluster Agreement of Same Family Respondents

Primary Respondent Cluster [f] [%]	Secondary Respondent Cluster			
	1	2	3	Total
1	24	32	5	61
	12.6%	16.8%	2.6%	32.1%
2	37	57	8	102
	19.5%	30.0%	4.2%	53.7%
3	7	14	6	27
	3.7%	7.4%	3.2%	14.2%
Total	68	103	19	190
	35.8%	54.2%	10.0%	100.0%

Frequency Missing = 189

Interpretation of Cluster Attitude & Time Use Profiles

Univariate statistics (means and proportions) for the different clusters are represented graphically in Figure 1. The graph titled "General Demographic Profiles" profiles the proportion of females (=1) to males, the proportion of married (=1) respondents, and the average number of children of the clusters. Also, the hours of paid work of the respondent in Figure 1 is the average of the indexed number of paid hours where 0=less than 5 hours, 1=between 4 and 31 hours, 3=between 30 and 46 hours, 4=greater than 45 hours. In the graphs that follow, connecting lines are included only for distinguishing clusters and do not represent trends.

Figure 1 shows that with one exception the demographics of each cluster are about the same. Cluster 1 has the most female (63%) respondents but not much more than Cluster 2 (59%) or Cluster 3 (52%). Further, these respondents have about the same ratio of married to non-married as the other two clusters (86%, 85%, & 79%, resp.). Their average number of children (2.4) lies between the other two groups (2.2 & 2.5, resp.). Comparisons of the average numbers of resident children in various age groups and adult dependents showed few differences across the clusters (not shown). Cluster 3 possessed the highest average numbers of young children (0.2) and adolescents (0.8) of the three groups only by small margins. Cluster 1 was the one group reporting resident adult dependents (0.04).

However, the graph titled "Domain Satisfactions & Unpaid Time Profiles" (Figure 2) reveals distinct behavior and attitude patterns across clusters. The means of the scaled responses for each cluster make up the vertical axis of the plots. Further, attitude variables were recoded so that a higher value represents relatively greater satisfaction, concordance,

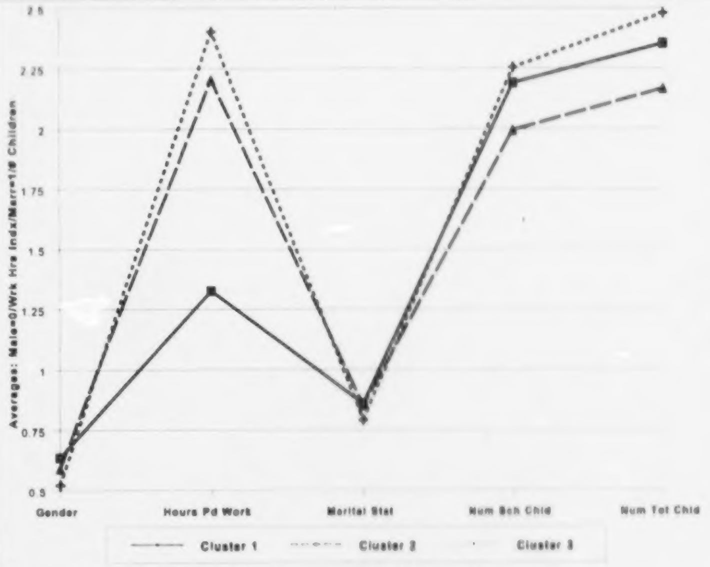

Figure 1. Time Use: General Demographic Profiles

or a more positive effect. A higher value also means more hours spent in an unpaid time use category. The interpretations discussed below are based on each cluster's average paid work hours (Figure 1) and their attitudes or perceptions of satisfactions toward their time allocations (Figure 2).

Happy, Child Oriented & Low Work -- Cluster 1

This cluster engages in the least paid work (Figure 1) and what work they do does not have much negative effect on their life satisfaction (Figure 2). They spend considerably more time than other family types attending their children's events and in immediate family activities (see Figure 2). Personal and non-child oriented social activities are a secondary part of these respondents' philosophy. Their overall satisfaction is comparatively high, especially their satisfaction with their child oriented social life. Thus the major time use domains of any concern for these individuals are their public and personal time use domains. However, compared to the other groups these areas are still quite satisfactory.

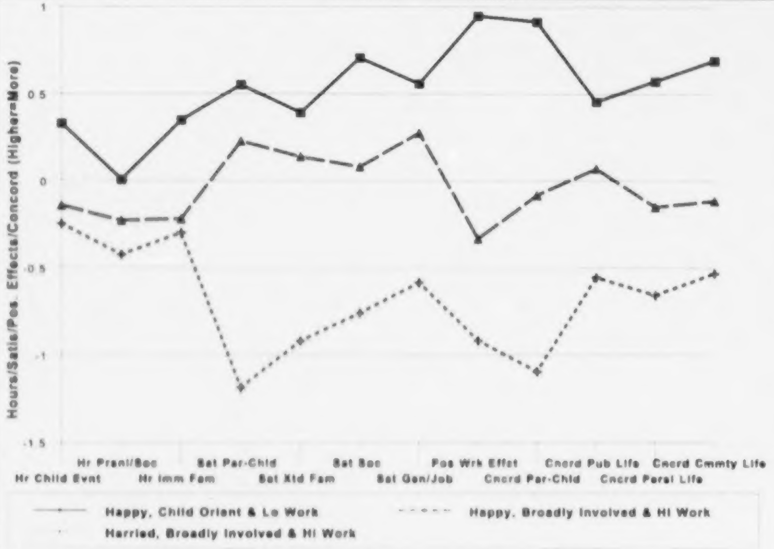

Figure 2. Time Use: Domain Satisfactions & Unpaid Time Profiles

Happy, Broadly Involved & High Work -- Cluster 2

This group, on the other hand, tends to spend much more time than Cluster 1 working for pay and less with children and family though relatively more with self. Somehow they accomplish this with only slightly less satisfaction from jobs, life in general, and from their children's development than the Child Involved families. They recognize that work greatly affects their immediate families and, thus, worry more than Cluster 1 respondents about this and their personal and community lives. The profile suggests that the undesirability of working is a major driver of their dissatisfaction. Still, for a Cluster 2 spouse matched with one from Cluster 1, the level of internal friction would probably be low and internal disagreements fairly easily reconcilable.

Harried, Broadly Involved & High Work -- Cluster 3

These individuals appear to have more problems than the others. The respondents spend even less time with children, immediate families, and personal/social time uses, compared to the Happy & Working and, especially, the Child Oriented. Though they work in the market only slightly more than Cluster 2 respondents, work affects their parent-child relations much more adversely. Their satisfaction is also extremely low for extended family relations and their children's development. The best parts of their lives are in the areas of job and their public/community lives, though still low relative to the other clusters. This group also expressed the least adequate rest (not shown). This suggests that something is interfering with family harmony, possibly an unhappy marriage, professional ambition, ill health, adolescent troubles, or a combination of these factors. Husband and wife pairs that involved Cluster 3 would probably exhibit very disjoint, utility inefficient behaviors.

Conclusion and Implications

Except for paid work hours, demographic and structural differences between clusters were minimal. The clear interpretability of the clusters then suggests that characteristic philosophies may exist across families and be important predictors of outcomes. Distinct levels and patterns of satisfaction with their chosen time allocations were exhibited by the clusters. Additionally, philosophical disagreements seem to exist between husband and wife pairs. While these results are only preliminary, they encourage the suspicion that standard regression models which categorize families primarily by simple demographics may be a cause of previous inconsistent empirical findings. Further, both results support the notion that the Beckerian altruism model of family utility maximization may not be generally applicable.

Perhaps rigorous frameworks should be explored that allow for some families behaving with imperfect economic rationality, in inefficient or even discordant ways. As an aid to this, researchers should more thoroughly investigate family time allocation and satisfaction within the context of characteristic family philosophies. Finally, policy makers interested in accurately predicting family time uses and well-being in different situations should consider funding the collection of additional attitude and perception information.

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Endnotes

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Chinese Consumer Types: A Correspondence Analysis

Based on data from a recent survey and a correspondence analysis, Chinese consumers were divided into four types. Among them, 50.8% were the "pragmatic" type who seek practical aspects of consumer goods without caring about commercial information, 33.9% were the "commercialized" type pursuing commercial information and brand name products, 11.7% were the "sociable" type getting information mainly from friends, and only 3.6% were the "conservative" type ignoring commercial information and disliking social changes.

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In 1978, China started its economic reform and open door policies, moving from a central command economy to a market economy. The transition process provides Chinese people an opportunity to be reborn as consumers in a real sense. Before the reform, Chinese had limited income that could be used only to purchase necessary consumer goods, of which many were rationed. In other words, the Chinese consumers had very limited choice in the consumer market and "consumer", literally, was a rare word to be used twenty years ago (Xiao, 1997). Since the economic reform, the market economy is forming, disposable family income is rapidly increasing, and consumer markets and marketing activities, like advertisements, which both benefit and annoy ordinary Chinese consumers, are growing and expanding. What are consumer characteristics during this historically significant transitional process? This study attempts to answer this question. Based on a survey conducted in Beijing, this study categorized consumer types with a multidimensional classification approach. This is the first study using this analytical approach with data from Chinese consumers. The findings of this study will further understanding of consumer attitudes and perceptions in the transitional China and lay the foundation for future studies on Chinese consumers and international comparison of consumer behavior.

Previous Research on Consumer Perceptions and Attitudes in China

Previous studies on consumer perceptions and attitudes in China are scarce, but they are growing recently. In the early 1980s, at the beginning of Chinese economic reform, Thorelli (1983) conducted a study on consumer behavior in China and concluded that Chinese had not formed an attitude towards advertising and their sense of it was still quite crude. However, according to the results of a survey carried out between 1988 and 1989, consumers were showing high interest in advertising and approaching it with the intention of acquiring information on shopping and products. Thus "as advertising is used as the information source of products, it is having various social and cultural effects on the lives of consumers, centered around the influence towards shopping" (Yamamoto, 1989). A survey conducted in 1994 indicated that the percentages of both positive and negative attitudes towards advertising among Chinese consumers had increased in the past five years (Li, 1997).

Two studies investigated Chinese consumer perceptions on and attitudes towards the economic reform and decision making styles. Xu, Fan, and Xiao (1997) reported that compared with American young adults, Chinese counterparts were more likely to have a negative attitude towards business people and a suspicious attitude towards business speculations. In another study, Fan, Xiao, and Xu (1997) found that dimensions of consumer decision making styles were similar among young consumers in China, the U.S., and Korea, although Chinese consumers were less brand conscious and more price and quality conscious. Hu and Kang (1997) conducted a literature review of studies on Chinese consumers and concluded that the number of the studies has been few and more studies are needed.

Method

Background Information about Beijing

Data used in this study were collected from Beijing, the capital and the second largest city of China. Beijing has a population of 10,618,000 (IMI Marketing Information Institute & International Advertising Institute, 1995). Compared to other Chinese cities, Beijing has the largest proportion of university graduates and the lowest illiteracy rate, and its residents have a higher educational level. Furthermore, the levels of income and spending are the second highest in China after Shanghai (Institute of China Research, 1991).

Beijing's shopping environment, which is influential on consumer behavior, has been changing rapidly since 1980. In 1980, there were only 16,833 stores in Beijing, compared to 127,627 in June 1991 (Yan, 1991). Because of the increase of new stores, consumer and purchasing behavior has also changed. For example, Wangfujing and Xidan used to be the shopping centers in Beijing, where many department stores and specialty shops were located and famous brands and new products were for sale. Today, the number of customers of these centers has been decreased, and more than 80% of them come from outside Beijing, which implies that the local Beijing people purchase more often in stores close to their neighborhoods.

Questionnaire

Questions used in the questionnaire were based on the framework outlined in Kuroda (1982) and Yoshida (1985). According to the framework, people's perceptions and values have been changing and diversifying in response to the social conditions of the times. In order to understand and analyze these changing perceptions, it is necessary to examine various factors that may determine the change. The following four factors, identified by Kuroda (1982) and Yoshida (1985), were considered in this study:

(1) Information orientation: This factor relates to information acquisition, such as how people find out about new products and goods, how they view their relationship with other people, and how they react to other people's opinions.

(2) Purchasing style: This factor relates to price and brand awareness, such as purchasing styles and awareness of famous brands.

(3) Life objective: This factor relates to people's view of life, such as what they think about their work, family, free time, and interests, and how they see their future.

(4) Social and economic factor: This factor relates to how people view themselves in their living environment, such as their attitude to life, the security of their future, and what they think of social changes.

Based on these four factors, sixteen questions regarding consumer awareness and attitudes were developed first in Japanese and then translated into Chinese. These questions and the frequency percentages of the answers are attached in the Appendix.[3] The questionnaire also included several other questions for demographic information.

Data Collection

The survey approach used in this study was a combination of judgmental and convenient sampling. First, four out of ten districts in Beijing were selected based on the researcher's judgment. The four districts are different in demographic characteristics. District Dongcheng is the center of Beijing with a comparatively large number of long-term Beijing residents. District Chaoyang is in the east of Beijing, where three large textile factories are located with a concentration of textile workers. District Haidian in the northwest of Beijing has many universities and research institutes, which is Beijing's educational and research center. District Shijingshan in the southwest of Beijing is the home for the largest iron and steel company in the country, where many residents are employees of the company.

Convenient sampling was used to choose 100 residents from each of the four districts. With assistance of resident committees (jumin weiyuan hui), the local community agencies in Chinese cities, in these districts, the questionnaires were distributed to selected families and collected ten days later. The survey was conducted between September and October, 1990. A total of 275 usable questionnaires were returned, which had a response rate of 68.8%.

Data Analyses

The Hayashi's (1950, 1982) Quantification Method III, which is called correspondence analysis in the U. S., was used to analyze the data. This method is a multivariate descriptive statistical method that represents graphically the rows and columns of a categorical data matrix in the same low-dimensional space. As Hoffman and Franke (1986) summarized, this method has several advantages. First, it has multivariate treatment of data through the simultaneous consideration of multiple categorical variables. Second, it shows how variables are related with graphic displays. Third, it has flexible data requirements, only a rectangular data matrix with non-negative entries is needed. However, this approach is an exploratory data analysis method that requires the expertise and experience of the researchers to interpret the findings.

Findings and Discussion

Descriptive Statistics of the Sample

Of the 275 respondents of the survey, 131 (47.6%) were men, 134 (48.7%) were women, and 10 (3.7%) did not report gender. Most respondents were in their twenties (47.6%) and thirties (22.9%). The occupation distribution of the respondents was as follows: white collar workers were 58.5%, blue collar workers 9.5%, students 12.4%, and other occupations 13.8%. Only 2.2% were housewives, which was still unusually high in China since almost all couples work, especially in the urban area.

The education attainment distribution among the respondents was the following: elementary school level accounted for 3.6%, junior high 6.2%, high school 17.1%, and technical school, university or higher 73.1%, which indicates that the sample is better educated than average Beijing people. According to the 1990 Census, the education levels of Beijing people were as follows: elementary school (21.1%), junior high school (31.1%), high school (19.3%), and technical school or university (9.5%). The highest percentage of household heads who were state run enterprise employees was 42.2%. Over half of the respondents (58.2%) reported having an annual family income "more than 3,000 yuan," compared with the average family income of 2,653 yuan in Beijing in the same year (IMI Marketing Information Institute & International Advertising Institute, 1995). Most of the respondents (66.5%) were living in a house belonging to the state. The percentage of respondents using public or company transportation was 2.2%, and the percentage of those possessing a bicycle was 92.4%.

Table 1
Correlation Coefficients and Eigenvalues

	Correlation Coefficient	Eigenvalues
Axis 1	.3458	.1196
Axis 2	.3097	.0959
Axis 3	.2934	.0861

Identified Factors

Using the Hayashi's Quantification Method III, three factors, Axis 1, 2, and 3, were identified. Table 1 presents the coefficient of correlation and eigenvalue for each factor.

Table 2 shows variables that are associated with the identified factors.[3] The degree of the influence of the variables on these factors can be recognized by the corresponding partial coefficients. For example, household head's occupation exerted the most influence on Axis 1. In Axis 2 the most influential variable was age, and gender was the most influential on Axis 3.

In this study, the first two factors (Axes) were focused. Table 3 presents the category scores of questions on each factor.[3] Because of the exploratory nature of this analytical method, the labels of the axes were given in a rather arbitrary way, but efforts were made to capture the essence of each factor by observing the items, especially the items with higher positive or negative values, on each axis. Based on the findings in Table 3, the two identified factors were labeled as follows.

Axis 1 - Information orientation that relates to other people's opinions and advertising.
Axis 2 - Price concern that relates to consumer's attitudes towards product prices.

Consumer Types

The identified two factors were used to form four types of consumers, which is shown in Figure 1.[1] Note that the types were classified, indicated in the circumscribed areas in the figure, based on the calculation of distance matrix with this particular method. After observing the items in each type, the four types of consumers were named as the pragmatic, commercialized, sociable, and conservative.

Table 4 presents the frequencies and percentages of the four consumer types. Of all types, the "pragmatic" type has the highest percentage, 50.8%. This is the type of consumer who does not care much about commercial information but pursuees the practical aspects of consumer goods. This type of consumer tended to respond that "I go straight to the shop and buy something", "I don't really care about the name of the store", "I want something practical", "I think about whether I can afford it or not", "When I have a holiday I avoid spending much money, and go with my family on a picnic".

The next largest group is the "commercialized" type (33.9%). This is the type of consumer who seeks commercial information and is aware of brand names. When asked about purchase practices, they tended to respond, "I buy after seeing advertisements", "If the store is famous I feel the product must be good so that is where I go", "I buy brand names", "I buy it, without thinking about whether I can afford it", and "When I have a holiday I go away for a few days and spend the money staying at a hotel". The "sociable" type included 11.7% of the respondents who enjoy their friends and current life and tended to respond, "When I buy consumer durable goods I follow the opinion of my friends and shop assistants", "I like having contact with as many people as possible", "I get on very well with my neighbors", "Giving priority to work and increasing one's income result in prosperity and safety for the household", "When saving up to buy an electrical product I stick to my original plan, even if life gets hard", and "I have most electrical items". Finally, the "conservative" type had the lowest percentage (3.6%), representing the consumer type who does not welcome any change in their personal life or society as a whole. These consumers tended to respond that "I like having close contact with a small number of people", "I'm fine with my present income", "I stick to my own opinion", and "I don't need all that much income or property".

Table 4
Consumer Types

Type	Frequency	%
Pragmatic	126	50.8
Commercialized	84	33.9
Sociable	29	11.7
Conservative	9	3.6
Total	248	100.0

Among the four types, the "pragmatic" type is reflective of the old central command economy. Consumers of this type got used to the invariant prices and limited supplies of consumer goods under the old economic system, but are not used to utilizing commercial information. This type of consumer is also consistent with traditional Chinese values that consider thrift as a virtue. This study indicated that the majority of respondents belonged to this type, which was partly consistent with previous studies. When asked to choose an option "thrifty is virtue" or "spending is virtue," the majority of the respondents had chosen the former in surveys conducted in several Chinese cities (Li, 1997).

The "commercialized" type mirrored the new and emerging market economy. This type of consumer would like to use commercial information and to purchase brand name goods. In a recent survey, consumers in more developed cities, like Shenzhen, were more likely to choose "spending is virtue" than their counterparts in less developed cities, like Beijing (Li, 1997). In the need of economic development, some Chinese consumption economists and government officials encouraged consumers to spend more instead of saving more. This group tends to expand along with the economic development of China.

The "sociable" type seemed to acquire product information through friends and satisfied with their current life. It is common for Chinese to acquire and disseminate information through friends. This may be a group of consumers who are satisfied with their current living conditions compared to their peers. The "conservative" type is typical in the older Chinese population. They are missing the "golden" old time and do not like the dramatically systematic change in the whole society, especially the increasingly commercialized aspects of the society.

Discussion of Selected Items

Awareness of Advertising. The findings of this study provided evidence that consumers in Beijing were more aware of advertisements than before. In a survey conducted in 1988 and 1989, Beijing consumers showed less interest in advertisements than their counterparts in Shanghai and Guangzhou (Yamamoto, 1989). However, data collected from this study showed that 62.2% bought luxury goods and 27.6% bought daily necessities after seeing advertisements.

Consumer Interaction. The data showed that 73.5% of the respondents reported that their relationship with their neighbors was enjoyable and 61.1% reported that they liked having contact with as many people as possible. The positive attitude of Beijing consumers towards "contact with other people" may influence their purchasing behavior. The most common way of acquiring information on products for Beijing consumers may be word of mouth.

Consumer Responses to Large-Scale Shopping Centers. The attitude of Beijing consumers towards a large-scale shopping center being built in their neighborhood is positive. In response to the question "How do you think your living environment would change if a large-scale shopping center were built near your home? (Or how has it changed if this is already the case?)", a relatively high 59.3% answered "I would be glad (am glad) because shopping would be (is) much more convenient and the surrounding area would become (has become) much more lively." As seen in the multidimensional analysis, this item fell in the "sociable" type. Consumers who would welcome a large-scale shopping center near their home may be people who pursue product information, seek low price goods, and enjoy a modern life-style.

Consumer Possession of Durable Goods. In this study, 51.6% of the respondents answered "I have most necessary electrical products." In the multidimensional analysis, people fell in the information oriented side. The findings imply that these consumers who "buy electrical goods after seeing advertisements", "get on very well with their neighbors", and "like having contact with as many people as possible", also "have most necessary electrical products" at home.

Consumer Characteristics and Consumer Types

The same analytical approach was employed in several subgroups to classify consumer types. The findings are reported as follows.

Gender. Among the "commercialized" type of consumer, the percentage of men (51.2%) was slightly higher than that of women. By contrast, among the "pragmatic" type, the percentage of men (44.1%) was slightly lower than that of women.

Occupation. White collar workers and blue collar workers turned out to be different in consumer types. For instance, 38.9% of white collar workers were the "commercialized" type, whereas only 13.1% of blue collar workers belonged to this type. However, 82.6% blue collar workers were in the "pragmatic" type.

Education. Although Beijing is a city where intellectuals of China are concentrated, in the survey carried out in 1988 and 1989 (Yamamoto, 1989), the characteristics of consumer behavior of this group were not distinctive. Findings in this study indicated a tendency towards the "commercialized" type among the better educated. For instance, among those with a university degree, the percentage of people who were the "commercialized" type was 43.0%, the highest among the four types.

Age. Young consumers were more likely to be the "commercialized" type. For example, among those aged 25 to 29, 43.7% were in this type, the highest among the four types. In contrast to this, among those aged 40 to 45, 63.6% belonged to the "pragmatic" type.

Income. Although it was predicted that among those with higher incomes, the "commercialized" type would have higher percentages, in fact the results from the multidimensional analyses showed that there was no significant difference among levels of income in terms of consumer types. At all levels of income, the highest percentages were the "pragmatic" type of consumers.

Summaries and Implications

Through correspondence analyses, this study categorized a sample of consumers in Beijing into four types. The findings of this study can be summarized as follows.

(1) The most common type of consumer in this sample is the "pragmatic" who seeks practical aspects of consumer goods and does not care about commercial information. However, there is also a tendency towards the "commercialized" type, since this type has the second highest percentage.

(2) Evidence from this study indicates that consumers in this sample may be more aware of the existence of commercial information than before; use word of mouth to communicate product information to each other; have positive attitudes towards large modern shopping centers; and relate their acquired information to purchase behavior.

(3) Gender, occupation, age, and education result in differences in consumer types. However, income does not show effects on consumer types. Men, white collar workers, the higher educated, and the younger are more likely to be the "commercialized" type.

The findings of this study imply that more consumers may belong to the "commercialized" type in the future, and fewer consumers will be in the "pragmatic" type along with the economic development of China when the age, occupation, and education effects are considered. As discussed before, the "commercialized" type is the product of the new market economy, which is both welcomed and worried about by consumer economists. Consumer economists advise consumers to smartly use commercial information in choosing products that suit their needs. Consumer educators may use different strategies to teach different types of consumers to become competent consumers and reach their optimal economic well being in the increasingly commercialized China.

This study has a couple of limitations. Since the sample is not a strictly random one, the findings are not representative of all consumers in China. While it is remotely possible to conduct a national consumer survey in China, it is possible to repeat the similar surveys in different cities in future. The types defined in this study are only considered rudimentary, and other advanced methodologies should be used to more accurately define consumer types. However, the findings add evidence to describe consumer behavior and its trends in China that enriches the literature. In addition, the findings of this study can be a starting point for future research on the similar topics. Further research is needed by conducting surveys that relate consumer perceptions to consumer behavior in China. International comparison studies, starting with data from Japan and U.S., should also be interesting.

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Endnotes

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3. Because of the space limitation, survey questions, Table 2, Table 3, and Figure 1 are not presented but they are available from the authors upon requests.

Uncovering History: An Examination of the Impact of the Ebony Fashion Fair and Ebony Magazine

Although the Black consumer market has been targeted heavily in the past three decades, much of the history of Blacks as consumers has not been shared. Exploring the history of minority consumer groups can reveal events and individuals which were significant in the development of the minority consumer group. This study explored the impact of the Ebony Fashion Fair and Ebony magazine on Black consumers.

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Introduction

Although the Black consumer market has been targeted extensively in the past 30 years, Black consumers functioned in a predominantly White marketplace for a much longer period of time (Gray, 1997). The important contributions made by the Ebony Fashion Fair and Ebony magazine to the Black consumer community are explored in this study. John H. Johnson, the founder of Ebony and the Ebony Fashion Fair, overcame many obstacles in his journey from a small town in Arkansas to Chicago where he built multimillion-dollar publishing, cosmetic, and insurance companies. He influenced the U. S. marketplace in the areas of publishing, advertising and marketing, fashion, and cosmetics. The reactions of Black consumers to the Ebony Fashion Fair and Ebony magazine were explored in this study.

Study Process

Sudents interested in the study of the history of the consumer movement can benefit from research that puts the methods used by cultural historians at the center of the research. This research becomes particularly useful when trying to focus on minority groups, part of the consumer culture historically dominated by a White majority.

While there is an issue over the idea that there is a distinct historical-comparative research method, most of the historical-comparative research can be organized along three dimensions (Neuman, 1994). These three dimensions are: a time element, be it in the past, over a period of time, or in the present; the type of data, qualitative, quantitative or some combination of the two; and the studied social group, a single people or many peoples.

The sources for historical-comparative research or minority cultures may be limited in traditional written sources. The technique of oral history uses information gained from unstructured interviews with people about events in the past. The approach is viewed as particularly valuable for nonelite minority groups often underrepresented in the printed records (Neuman, 1994). In this study, the standard steps used in a historical research project were followed. The first step was to conceptualize the object of inquiry. This interest was focused on the Ebony Fashion Fair and its impact on Black consumers, particularly women. Today the annual Ebony Fashion Fair, which began in 1958, has become a year-round business that travels to about two hundred cities in the United States, and in Jamaica, the Bahamas, London, and Canada. These shows produce more than 300,000 subscriptions for Ebony and Jet magazines. The influence of these shows on the Black community and the world of fashion has been significant. The initial interest in the fashion fair was expanded to include Ebony magazine as respondents recalled reactions to both the fashion fair and the magazine. The second step was to locate evidence about the fair, from primary sources, in this case individuals who had actually experienced the Ebony Fashion Fair and Ebony magazine, and published material on the Ebony Fashion Fair and Ebony. Those interviewed included early models in the Ebony Fashion Fair, early members for the organizations that sponsored the event, and Ebony Fair audience participants. Each of the interviews began with some standard questions. One important aspect of oral history as a research technique, is that the interview must be sufficiently open-ended to allow the respondent to share information that the interviewer might not have contemplated. The interviewer must be astute in recognizing such information, following through as leads open, and incorporating the findings into the results. All interviews were tape recorded and subsequently transcribed. Because different viewpoints and perceptions were investigated, it was necessary for the interviewer to subsequently evaluate the quality of the evidence. Written information on the Ebony Fashion Fair and Ebony was of assistance in making the quality evaluations of the taped interviews.

In examining historical documents and writing about Black consumers, it is necessary to grapple with the correct terminology for the group. At various times in American history Black people have been known as "clored people," "people of color," "Negroes," "Afro-Americans," "Aframericans," "black Anglo-Saxons," "black Americans," and by a number of other appellations (Hughes, 1983). While dictionary definitions of the terms colored, Negro, black, African-American exist, different terms have been favored at different times in history. In the 1930s and 1940s the term was colored people, then in the 1950s and 1960s, Negro people was the favored term. During the 1970s and 1980s Black people was the chosen nomenclature and during the 1990s the favored terms have been African-American or Black.

Five themes emerged from the results of the data gathering. The first is that both the Ebony Fashion Fair and Ebony provided positive images to encourage and inspire the Black race and show that it was possible for Blacks to reach their full potential. Black models in the fashion fair did not need to be light skinned as ebony complexioned women were shown as vibrantly beautiful in bright colors. For the darker-skinned women viewing the fashion fair the use of dark-skinned models was a validation of their own self-esteem. The use of Black models wearing designer fashions gave Black women a new view of themselves and their potential. The professionalism and detail of the fashion fair set new standards in Black communities.

A second theme is that Ebony Fashion Fair increased opportunities for Black models, designers, photographers, and entertainers. In the 1940s Ebony magazine convinced mainstream U.S. manufacturers to use Blacks in their advertisements in the magazine. In the 1950s Eunice Johnson recruited Black models for the traveling fashion fair. As the fashion show expanded the number of cities it regularly toured, doors were opened for Blacks in the fields of fashion, photography, and marketing. This allowed Blacks to join the mainstream of American businesses in a way that had not been possible before.

A third theme is the substantial impact that the Ebony Fashion Fair had on Black charities and organizations. The first Ebony Fashion Fair was the result of a request for assistance by the wife of the president of Dillard University, in New Orleans, Louisiana. Mrs. Albert Dent was trying to organize a charity fashion show for a New Orleans hospital. That first show and all subsequent Ebony Fashion Fairs helped local Black organizations generate thousands of dollars for charity and scholarship. Following an approval to sponsor the show, the local sponsor sets a ticket price that covers expenses, the cost of an Ebony or Jet subscription, and the charitable contribution. Sponsors of the Fashion Fair have included local Urban Leagues; the National Association for the Advancement of Colored People (NAACP); the United Negro College Fund (UNCF); Black sororities, including Alpha Kappa Alpha (AKA), Delta Sigma Theta, and Zeta Beta; and national women s social and civic organizations like the Girl Friends, Inc., The Links, Inc., and Jack and Jill, Inc. (Angelou, 1995).

A fourth theme is that Ebony magazine provided opportunities for the display of Blacks' interests beyond fashion. Blacks' interests in politics, business, entertainment, and social events were featured. These opportunities served to educate and enlighten Blacks at times when their interests in these areas were underrepresented in the White culture.

The final theme was the impact that both Ebony and the Ebony Fashion Fair had on the White consumer culture. The success of both changed how corporations and individual White consumers viewed Blacks as consumers.

Several respondents reflected on the impact of attendance at the Fashion Fair on their White guests, both their attitude and their enjoyment. Both the success of Ebony and the Ebony Fashion Fair demonstrated that diversity and inclusion could be of benefit to all concerned.

Implications

The technique of oral history is particularly appropriate for investigating the history of consumer activity and events in minority populations. The past activities and events in the lives of minority consumer groups are largely unexplored and those which might have exerted significant influence on minority consumers have remained unidentified. The revealing of the consumer past of minority populations can deepen our understanding of the history of the consumer movement and increase our understanding of the interrelationships among different consumer groups.

Researchers can use the method of oral history to explore older adults recollections and thoughts about consumer events as they experienced them. Even grappling with something so seemingly simple as the correct terminology for members of the minority has learning potential. The sharing of the recollections of members of minority consumer cultures can result in increased awareness of the complexity of the consumer role for minorities. Consumer education could include discussions on the unknown contributions of minorities to the predominant consumer culture or key minority individuals who impacted their cultures and brought those cultures into the mainstream consumer culture.

Historian William Loren Katz noted that "Afro-Americans have been treated by writers of history as invisible. Their contributions were denied or handed to others." Katz believed "omission, not distortion is the far more serious culprit in hiding the story" (Katz, 1986). Consumer researchers have the opportunity to explore the contributions of members of minority races to the mainstream culture.

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Endnotes

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Truth In Lending: What Constitutes Adequate Disclosure in Consumer Credit?

In 1968 the Truth-in-Lending Act became law. The Act was intended to better enable consumers to comparison shop for credit by requiring the disclosure of certain aspects of the loan (e.g., APR, number and amount of payments, total finance charges). It is nevertheless possible for lenders to comply with the requirements under the Truth-in-Lending Act while circumventing its intent. This educational program was designed to assist consumers who are engaging in credit search behavior by exposing those techniques.

Paul L. Camp, Purdue University[1]
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Background

Perfect information is assumed in competitive markets (Barron & Lynch, 1993). Indeed, consumers' ability to make rational decisions depends upon their having access to accurate information. To improve the quality of information provided to American borrowers, Congress passed the Truth in Lending Act (TiL) in 1968.

Under TiL, lenders are required to disclose to the borrower certain information regarding the proposed or pending loan. It was felt that this knowledge would benefit consumers by 1) providing a simple method of comparing competing loan offers, 2) allowing consumers to identify particularly good or bad proposals and 3) permitting borrowers to compare the merits of using existing liquid assets versus additional borrowing (Egan, Freeman & Simon, 1971). Among other things, lenders must disclose the cost of the loan, expressed as an annual percentage rate, an itemized total of the amount financed, the cost of the loan expressed in dollar terms and the number, amount and due dates of the payments required under the terms of the contract (Morganstern, 1972).

In the lending process, the potential for manipulating the consumer is highest during the actual signing of the loan contract, a process known in the trade as "closing the loan." By subtly controlling the terms of the interaction, it is possible for lenders to conduct the closing in a manner than ensures compliance with Truth in Lending while subjugating TiL's intent.

Educational Program Contents

"Into the Shark Tank: Surviving the Loan Closing Process," is an instructional package developed and produced Purdue University's Cooperative Extension Service describing how lenders can obscure the intent of the Truth in Lending Act. The materials were designed for use with several diverse audiences in the context of a basic money management information course or series of seminars.

A short videotape presents several vignettes illustrating ways in which the loan closing may be directed by the loan officer to manipulate the consumer. The host of the video is a former loan officer who was trained in using these techniques and speaks from personal experience. Each is followed by a brief explanation in which the host exposes the manipulation, describes why each is so effective and offers suggestions for countering each.

The package also includes camera-ready copies of reading materials summarizing the information presented in the video (designed as handouts for program participants), and pre- and post-test participant evaluation tools. Program evaluations ($t=1.88$, $p=.05$) indicate that participants completing the program are better equipped to enter the consumer credit arena and negotiate a contract satisfactory to both borrower's and lender's interests.

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Relationship Between Nursing Home State Inspections and Consumer Satisfaction

Nursing homes that received fewer deficiencies on State Medicaid Recertification surveys were also the nursing homes that received higher satisfaction scores by responsible parties. The finding supports the notion that knowledge of state inspection results can assist in selecting a nursing home.

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Building on a 1995 Consumer Reports study, the overall purpose was to examine the relationship between number of deficiencies from State Medicaid Recertification inspections and consumer satisfaction with nursing homes. Consumer satisfaction has been recognized as an important outcome variable and indicator of quality in nursing homes.

Nursing home satisfaction data were collected by a questionnaire mailed to the responsible party of every resident in a random sample of 16 nursing homes in a southern state. A total of 1,362 surveys were mailed, and 850 were returned in usable form for a response rate of 63.3%.

To measure satisfaction, a single global satisfaction item was used. Responsible parties were asked to rate their overall satisfaction with the nursing home on a scale ranging from 1 to 5 (1= very dissatisfied and 5= very satisfied). The combined responses of responsible parties in each nursing home on this global question were used to determine the average satisfaction level for each nursing home. Using data from State Medicaid Recertification surveys conducted by the Louisiana Department of Health and Hospitals, the number of standard deficiencies were determined for each of the 16 nursing homes for four years. The four-year block (1991-1995) was chosen because this time frame was used in the Consumer Reports article and deficiency data were available for four years.

To examine the relationship between number of deficiencies and consumer satisfaction, three models for weighting the four years were tested. Model one allowed the regression procedure in SAS to determine the weights for each year according to its own estimate for the best fit. Model two added the results from the four years , weighting all four years equally. Model three used a logical formula for weights giving greater weight to more recent years .

Multiple regression analysis was used to examine the relationship between State Medicaid Recertification surveys and responsible party satisfaction under the three models. The normal assumptions for regression analysis were checked. Diagnostic procedures for influence (DFFITS) and multicollinearity in regression were also conducted.

Satisfaction scores for individual facilities ranged from 3.67 to 4.52. One-way analysis of variance indicated the means for responsible parties' level of satisfaction differed among the 16 nursing homes, $F(15,823)=3.03$, $p=.0001$.

Using model one, the relationship between number of deficiencies and responsible party satisfaction was found to be significant [$F(5,9)=5.43$, $p=.04$]. Similarly, model two displayed a significant relationship [$F(2,12)=4.32$, $p=.04$]. Using model three, the relationship was not significant [$F(2,12)=2.96$, $p=.09$].

Model one explained the greatest amount of variance, ($R^2=.75$), followed by model two, ($R^2=.42$), and model three, ($R^2=.33$). Similarly, the amount of variance explained by the numbers of deficiencies from state surveys (partial R^2) were model one, partial $R^2=.64$, model two, partial $R^2=.31$, and model three, partial $R^2=.22$.

A significant relationship between responsible party satisfaction and results from state inspections was found. The nursing homes that received fewer deficiencies on the state surveys were also the nursing homes that received higher satisfaction scores by responsible parties. This finding supports the idea that state inspections correctly identify good nursing homes.

Endnotes

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Measures of Healthful Dietary Practices of College Students.

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Purpose

The focus of this study was to identify healthful dietary practices and dietary change among undergraduate students enrolled in a land grant university.

Method

Two mailings of 97 item survey were sent to 1271 students enrolled at the University of Delaware, Fall 1995. Healthful eating practices were compared to Food Guide Pyramid recommendations, and four diet-related behaviors were assessed.

Results

A 30 percent response rate was achieved with a total of 379 responses (215 and 164 at first and second mailings, respectively). The study sample was statistically representative ($p<0.05$) of the overall student population in terms of class status and college. However, a statistically significant ($p<0.001$) larger number of women participated in the study relative to the proportion of women in the total student population.

Healthful practices: All healthful dietary practices were followed "sometimes" or "almost always" by at least 69% of students. They were likely to be tasting foods before salting (85%), limiting eggs (83%), and avoiding the addition of high fat gravy and sauces (80%). They also tended to regularly consume six servings of bread, cereal, and/or pasta (60%). On the negative side, those practices followed with least frequency included eating at least two servings of fruit (69%) and three servings of vegetables (68%) on a daily basis.

Overall dietary adequacy as indicated by a comparison with Food Guide Pyramid recommendations was disappointing. Although 254 students (67%) indicated they attempted to meet minimum recommendations at least "sometimes," only 10 students (3%) achieved a perfect score of 5 (met all recommendations). Ninety-four students (25%) scored 1 (met only one recommendation).

Dietary Change Score: A mean Dietary Change Score (range -3 to +3) was constructed based on whether the student reported following each dietary practice more, less, or as often since arriving at college. A positive score indicated that a healthful dietary change had been made; a negative score, a less than healthful dietary change. On an optimistic note, students were currently not adding extra fat items to foods regularly (mean score 1.21) and were asking for low fat milk varieties (0.7) more frequently. Conversely, they were less likely to eat two servings of meat/meat alternative (-1.46), three servings of vegetables (0.94) and two servings of fruit daily (-0.82). Overall scores indicated a movement away from a healthful eating practice upon arriving at college. There were no differences in the dietary change score based on gender, academic status, or dining plan option. Data support the conclusion that those who reportedly were meeting recommended food group patterns were also more likely to have adopted healthful dietary practices since arriving at college.

Conclusions

Overall dietary adequacy was disappointing. Two-thirds of the students indicated they attempted to meet minimum recommendations, only 3% were doing so. While reporting efforts to limit salt, fat, and cholesterol in their diets, the overall trend was to move away from healthful eating practices since coming to college.

Recommendations

- identify barriers and develop educational strategies that focus on "how to" establish and maintain healthful eating practices
- focus more attention on healthy food choices in campus food services
- facilitate positive change in eating practices through consumer economics and consumer health courses.

Endnotes

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Choices That Make Change: A Collaborative Effort Between A Utility Company and Extension

To address the financial hardships faced by Connecticut consumers, the University of Connecticut Cooperative Extension system developed a financial management outreach program in collaboration with Northeast Utilities. Results of this five-year public service effort and curriculum were presented.

Annette T. FitzGerald, University of Connecticut[1]

Background Situation

In 1993, the University of Connecticut CES Family Economics Team developed "Choices That Make Change: Your Money" as a public service outreach program in collaboration with Northeast Utilities to assist utility customers experiencing financial hardships. The Choices Money Management program was pilot tested and delivered to over 3000 Connecticut residents in 1994-95. The Connecticut Labor Department adopted the curriculum in 1995 for use as a mandatory workshop for 36,000 targeted unemployed residents. Northeast Utilities Community Outreach staff continue to provide this program as a public service outreach program reaching over 2,000 consumers annually. Findings from program evaluations indicate that a majority of participants plan to make changes in one or more money management practices.

Program Description and Curriculum Overview

The Choices Money Management Workshop addresses the financial stresses faced by families and individuals living on limited incomes and others who experience changes in financial status. The two-hour workshop features a slide presentation and participant workbook designed to enable financially stressed individuals to make positive changes through improved money management practices. The collaborative effort between the utility company and the Cooperative Extension System involved the development of the educational material and training of Community Outreach staff. Northeast Utilities funded the program providing the visuals, workbooks and calculators for program participants. Cooperative Extension Educators were contracted to provide educational programs statewide in conjunction with the utility company as an outreach program to local social service agencies.

The curriculum focuses on resource management skills and debt management principles. The workshop emphasizes taking control of personal finances through discussion of goal setting, budgeting, debt management, and practical ways to reduce expenses. Extension Educators upon request provide follow-up budget counseling and referrals are made to the Consumer Credit Counseling Service for debt management.

Social & Economic Impact

The program has been presented to several thousand Connecticut residents who are ethnically, educationally, economically and geographically diverse. The collaborative effort between a utility company and educational institution in cooperation with social service agencies and organizations helped Connecticut residents to effectively plan how to manage their resources more effectively. Data collected from 2,975 workshop participants in 1994-97 revealed: 89% (n 2652) felt better about managing their money; 82% (n 2442) plan to establish money management goals: 85% (n 2522) plan to develop a budget;. 80% (n 2365) plan to reduce spending; and 58% (n 1730) plan to make payment arrangements with creditors.

Collaborative efforts between business, social services, and educators can be a viable partnership in addressing the financial needs of consumers. Early intervention through implementation of money management education programs and counseling programs can help participants overcome financial obstacles.

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Assessing the Causal Relationships Among Materialism, Reference Group, and Conspicuous Consumption of Korean Adolescents

The objective of this study is to explore the nature of the relationship among reference group, materialism, and conspicuous consumption of adolescents, and estimate the magnitude of the linkages between these variables. The conspicuous consumption model suggests economic, noneconomic, and dynamic processes be related to conspicuous consumption of adolescents. The strongest predictor of conspicuous consumption of adolescents is reference group, followed by materialism. But an analysis of direct and indirect effects shows that materialism has the largest total effect on conspicuous consumption of adolescents. Materialism has significant indirect effect through reference group.

Jeong Sook Kim, Cheju National University, Korea[1]

Adolescent groups are different from other age groups in their consumption behavior. The consumption habits developed by adolescents may influence consumption for years to come. In recent years, the buying power of adolescents has increased dramatically. In Korea, it is argued that adolescents have tendencies for compulsive buying and conspicuous consumption. Therefore, it is important to understand variables that effect conspicuous consumption of adolescents. The objective of this study is to explore the nature of the relationship among reference group, materialism, and conspicuous consumption of adolescents, and estimate the magnitude of the linkages between these variables.

Data for this study are taken from questionnaires returned by a subgroup of 588 adolescents during October 1996. The adolescents were randomly selected from Middle and High Schools in Cheju City, South Korea. Pearson correlation, multiple regression, and path analysis were used to analyze the data. Independent variables in this study included age, gender, family income, household size, and mother's age and educational level, pocket money, perceived level of living, reference group, and materialism. The dependent variables included conspicuous consumption. Evaluation of conspicuous consumption was measured by computing an index out of 30 items. Materialism was measured by computing an index out of 12 items. Reference group scores were established by using the total scores on 5 questions. All items were recorded on a five-point Likert-type scale ranging from extremely disagree (1) to extremely agree (5).

It was hypothesized that age, male, family income, household size, and mother's age and educational level, pocket money, perceived level of living, reference group, and materialism would be positively related to conspicuous consumption of adolescents.

The conspicuous consumption model suggests economic, noneconomic, and dynamic processes be related to conspicuous consumption of adolescents. The results of regression analysis show that the strongest predictor of conspicuous consumption of adolescents is reference group, followed by materialism. Materialism and reference group mostly influence conspicuous consumption of adolescents. Age and gender have statistically significant relationships with conspicuous consumption of adolescents, whereas mother's age and educational level, household size, and perceived level of living are not significantly related. Family income is not statistically significant in explaining conspicuous consumption of adolescents, and has only indirect effect through pocket money. These results indicate that family income is not an important predictor of conspicuous consumption of adolescents. Whereas, the results show that pocket money has significant direct and indirect effects on conspicuous consumption of adolescents. Pocket money has significant indirect effects through materialism and reference group. Therefore, conspicuous consumption of adolescents is influenced more by how much pocket money adolescents have to consume at their discretion than by their family income. This is an important finding because it supports the need for concern and control about pocket money of adolescents. An analysis of direct and indirect effects shows that materialism has the largest total effect on conspicuous consumption of adolescents. Materialism has significant indirect effect through reference group.

Endnote

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The Attitudes and Behavior of Young Adults toward Credit

Results analyzed from the 1989 Survey of Consumer Finances reveal that despite expressing cautious attitudes toward credit as a group, some households headed by young adults carry a very high debt-to-income ratio and report difficulty with paying debts on time.

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Introduction and Methodology

Debt has become the key word of the mid 1990's. Young adults in the United States are portrayed as spendthrifts, mortgaging their future for a frivolous, extravagant lifestyle. The objectives of this study were to identify the attitude of young adults toward credit, to determine their spending and credit behavior, and to relate their attitude toward credit to their credit behavior. This study used the 1989 Survey of Consumer Finances. The sample consisted of 123 young adult heads of households who were 25 years old or younger, with a mean age of 22.8. Sixty two percent of the respondents were male and the mean educational level was 13 years. Despite the fact that 69% had never been married, the mean household size was 2.2. While the mean income was $17,613, 39% had incomes under $10,000. For purposes for this particular poster, only results of frequency distributions are reported.

Results and Discussion

The young adults may be considered moderate in terms of their opinions and some of their financial behavior. When asked about credit in general, 58% felt that credit was a "good idea", 28% thought it was a "bad idea", while 15% thought it was "both good and bad." Forty percent of those who held credit cards identified themselves as convenience users, 35% identified themselves as installment users. Respondents were asked to select from among five reasons as many as they thought were "okay " for persons like themselves to use credit. Only 2% approved of all five. When asked to identify statements which described their spending behavior, only seven percent described themselves as both not saving and spending more than their income. In reality, the young adults' behavior reflected a greater use of credit and for some, overwhelming debt. Fifty-one percent held at least one credit card, with a mean of 3.8 cards. Thirty-three percent had credit card debt with a mean debt of $1,104. A weighted tabulation of opinion of credit and credit card debt of all 123 respondents revealed that those who saw credit as both bad and good had the lowest mean credit card debt, $152, while those who saw credit as bad had a mean debt of $766. Almost 70% of the respondents were carrying some non-school loan debt, the mean of total debt for the debtors equaled $6,223. For those respondents with debts, the mean debt-to-income ratio was 0.57. Almost 10% of all respondents had a level of 1.00 or greater. This high debt load may explain why 43% of the debtors made late payments or missed a loan payment the previous year.

Young adults see themselves as cautious money handlers. While credit was generally seen as positive, the reasons for using credit were limited. Only a few profess to spending more than they earn, but some are also carrying a very high debt-to-income ratio. Those young adults who see both the good and bad sides of credit have the lowest credit card debt. Young adults should learn how to balance the need and desire to accumulate the goods deemed necessary for comfortable living in the United States with the smaller incomes young workers earn.

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Endnotes

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PolicyWeb: Using the Internet for Research in the Consumer Sciences

The Internet has created an information explosion. Finding reliable and factual information on the Internet, however, can be a daunting task. The PolicyWeb website facilitates policy research on the Internet. PolicyWeb includes lessons on using the Internet, privacy and regulation on the Internet, and how to contact policy makers and regulators through the Internet. It also includes a database of evaluated policy-related websites to facilitate Internet information search.

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There has been an explosion in the availability of current and accessible information through the recent growth of the Internet. Finding specific information on the Internet, however, can be a daunting task for faculty and students alike. Consumer policy issues in particular are ideal subjects of investigation on the Internet since information can be updated quickly and easily. Many governmental agencies and other consumer policy-related organizations are maintaining the most up-to-date and relevant information through their own websites.

The Internet allows more than one person to access the same information at the same time, unlike the way a book has limited availability when it is checked out at the library. Additionally, the ever-changing nature of the Internet challenges users to expand their knowledge frequently. Keeping up with the Internet helps users to develop life-long learning skills, one of education's main goals (Geyer, 1997). These skills are particularly important for researchers in the consumer sciences who must be conscious of new developments in the ever-changing marketplace and regulatory environment.

The volume of information on the Internet, however, can be both a blessing and a curse. Some users may be overwhelmed by the thousands of documents returned when querying the typical search engine. The efficiency of searching on the Internet is decreased when users are forced to wander from site to site, while trying to find sources of information that match their needs (Carvin, 1997). Policy researchers on the Internet need the tools to make their information searches as efficient and precise as possible, in order to take full advantage of the available information.

The authors of this paper, through a USDA Challenge Grant entitled "Navigating Cyberspace for Policy Analysis in Family and Consumer Sciences" have created a policy analysis website, PolicyWeb (http://www.fcs.uga.edu/policyweb), that facilitates policy research on the Internet. PolicyWeb focuses on the development of a series of lessons for faculty and students that will develop their ability to use cyberspace for policy analysis concerning consumer issues and other areas. The five lessons are designed for both faculty and students, as well as anyone else interested in the policy making process. Each lesson covers an important aspect of using the new technology in policy analysis.

A database of policy research resources on the Internet and two search engines (one for the text of the website and one for the database) complete the compliment of tools found on PolicyWeb. Our website thus provides a convenient reference source around a policy research tool. Since PolicyWeb was not created with one specific course in mind, it can be useful in many areas of research and is open to all Internet users.

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Consumers' Views: Electricity in Botswana

A study of Botswana electricity consumers explored satisfaction and concerns. Information awareness and use are limited. Recommendations for consumer actions and power company efforts are made.

Selinah Peters, Commerce and Consumer Affairs, Botswana[1]
Carole J. Makela, Colorado State University[2]

As U.S. consumers face deregulation of electricity, Botswana consumers express a need for regulation to ensure affordability of electricity. Consumption is growing in Botswana, approximately 30 percent of households have electricity (BPC Annual Report, 1995). The study investigated Botswana consumers' needs and concerns about service quality of electricity (Peters, 1997). Objectives were to (1) gather data to serve as guidelines to improve and enhance satisfaction with electricity services; (2) provide recommendations to develop education programs; (3) determine consumers' concerns and make recommendations to Botswana Power Corporation (BPC) and the government. As consumerism is new in Botswana, studies have not explored consumers' views on service quality of electricity. A questionnaire was developed and mailed to Botswana electricity consumers residing in eight selected towns and big villages. The response rate was 45 percent (101 usable returns).

The consumers' profile indicated low education (61%)—from standard one to certificate level—and middle and low income levels—P500 to P3,000 ($167 to $1,000 (US)) per month. Electric bills averaged P119 ($40 (US)) per month. Most used both electricity and gas—gas for cooking and heating water; electricity by a majority for lights, irons, televisions, stereos, refrigerators, and fans. Most consumers "did not know" about items concerning consumer satisfaction, but, on a general item, indicated satisfaction with services. The majority had not experienced disconnects. Few knew of the disconnection notice printed on all bills.

The majority of consumers expressed concerns about high prices. Most were concerned about receiving electricity bills after due dates. The cause of delays was not determined. Over 60 percent experienced situations warranting complaints: inflated charges, power failures, poor service, delayed connections, service disruptions, inappropriate disconnections. Two-thirds with complaints took no action. Reasons for not filing were inadequate information and not knowing how to present complaints. Most consumers were not aware of energy efficiency and electricity information even though BPC produces brochures and pamphlets. Most consumers were aware that energy efficiency information could help save electricity, but did not know where to get information. No differences in awareness of information between town and village consumers, education levels, and income levels were found.

Recommendations on policy are for the Minister of Commerce and Industry and government units; those on dissemination of information are for BPC. Four major needs/concerns were identified: (1) lack of knowledge or inadequate information on electricity issues; (2) lack of knowledge or awareness of energy conservation; (3) electricity charges; and (4) late bills. Though information and materials are produced, consumers need education—how to process and understand information to make wise decisions.

Consumer education programs in Botswana can empower consumers to make wise decisions, but will only be effective if consumers exercise their rights and responsibilities. To improve awareness and knowledge, it is recommended that (1) consumers form watchdog committees to discuss and take action on concerns (most consumers indicated an interest in serving on such a committee); (2) through these committees, consumers can meet with BPC's representatives; and (3) can ask BPC and/or Consumer Affairs' representative to hold educational workshops/seminars. Lacking agencies similar to public utility commissions, it is recommended that the Consumer Education and Protection Unit collaborate with other agencies to address priorities related to consumer awareness, representation, and redress.

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Beyond Assisted Living Facilities: What Factors Predict Consumer Planning?

A gap exists in the literature related to assisted living facilities, and prompts research questions addressing the role of kin in placement, financial management assumed during marriage, locus of control, and attitudes toward long-term care.

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By the year 2050, the number of adults aged 85 years and older is expected to equal the number of adults aged 65-69 years. With this prediction comes the concern about the declining health and independence of elderly Americans. Better education, health care, and nutrition as well as a healthier lifestyle help decrease the number of chronic disabilities in the elderly population. There is an increasing demand for options that help individuals maintain independence.

Considering the importance of maintaining independence during the progression through the aging process, many older adults are choosing to live in assisted living facilities. Such communities are designed for those who cannot function in an independent living environment, but do not need nursing care on a daily basis. The assisted living facility offers a special combination of housing, supportive services, personalized assistance and health care designed to respond to the needs of those who need help with activities of daily living and instrumental activities of daily living. Such facilities aim to promote dignity and independence for each resident. But what contributes to effective planning for changing health care needs beyond the move into an assisted living facility? The critical question with this population is not so much how they arrived at the decision to enter the facility, but whether individuals and families have planned beyond the current level of care needed. This gap in literature prompts the following research questions: **1) Is the quality of the relationship with kin (spouse, adult children, siblings, etc.) an important factor in the prediction of inclination to plan for changes in the need for health care?** While having living relatives reduces the chance of nursing home admission, it is also known that absence of kin nearby is predictive of moves into retirement communities and group housing. How influential are relatives in the decision to move into an assisted living facility? **2) Does the financial management role the elderly person assumed during the marriage help to predict the inclination to plan?** In earlier times, women were socialized to be dependent, and hence, plan less for future needs. Given that women outlive men, many elderly individuals choosing assisted living facilities likely are widows. Does the financial management role assumed during the marriage affect planning for health care needs? **3) Can locus of control help predict the extent of an individual's planning decisions?** McKenna and Nickols (1988) found that perceived internal locus of control contributed to the inclination toward retirement planning. Does locus of control also affect the inclination to plan for changes in health care needs? **4) Do attitudes toward long-term care affect planning decisions?** Gibler, Lumpkin, and Moschis (1997) found that retirement community residents perceived nursing homes less negatively than did older adults still living in traditional housing. Do attitudes toward nursing homes become more positive as a result of the assisted living experience?

In the focus group stage of the research, we will explore issues related to planning for changes in health care needs both prior to and following the move into the assisted living facility. Results of the analysis of the focus group data will guide the larger data collection effort. The information generated by the research will assist us in developing guidelines for consumer educators and health care planners.

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Telemarketing Fraud in a Gated Senior Living Community

Over the last several years, senior citizens have been increasingly victimized by telemarketers whose fraud schemes focus on the elderly. This study examines the victimization among a random sample of residents in a large gated senior living community. Findings reveal that few independent variables were useful in the logistic regression model. Three variables, (believing telemarketers, making friends with telemarketers, and total number of friends), marginally predicted victimization.

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Introduction & Background

Telemarketing has been around since the 1920's and the industry has grown into a thriving business, approximately 400 billion dollars per year (Senate, 1993; US House of Representatives, 1993). Unfortunately, there are some telemarketers that are dishonest, and take advantage of consumers. Furthermore, it is the fast growing population of senior citizens on whom many of these unscrupulous telemarketers prey.

There has been much debate about the causes of telemarketing victimization and the elderly. It appears that age alone is not a suitable explanation for why senior citizens are victimized. Other factors such as education, isolation, income, race, loneliness, self reliance, informedness, preference for telephone sales, aggressiveness of sales people, etc. are important in determining susceptibility to fraud. Our review of the literature revealed a mixture of empirical studies and detailed theoretical arguments that seek to explain the victimization of senior citizens.

Methodology & Results

The purpose of this study was to investigate the occurrence of telemarketing fraud in one gated senior living community in Southern California. A survey instrument was administered to a random sample of 371 residents (of 8,197 total residents). A total of 171 usable surveys were analyzed. The dependent variable was Victim (0/1). Independent variables included: a Self Reliant Scale, believing telemarketers, total number of friends, level of isolation, making friends with telemarketers, and level of mobility.

This study used a logistic regression model to examine predictors of telemarketing victimization. The explanatory power of the logistic regression model was fairly weak, but some explanatory power was found in three variables. The results of our study revealed that participants were more likely to have been scammed if they believed and made friends with telemarketers. In terms of number of friends, victims had more friends on average than non victims. More research is needed in this area.

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Endnotes

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PEP: Personal Economics for Preteens

Preteens today are a viable and perceptible target market for many companies. According to the US Census Bureau, 'there are approximately 19 million young people between the ages of 9 and 14. This Aboomlet≅ of preteens has become a powerful group of consumers. This segment of the population spent over $100 billion on consumer products in 1995 (Isa, 1996), which is a 38% increase over 1990. Preteens have more discretionary income than any preceding generation.

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Purpose

The purpose of this paper was to determine if there are differences in sources of preteen income based on gender. One objective was to estimate the proportions of difference income sources available to preteens; the second objective was to compare the amount of allowance that boys and girls receive.

Preteens have numerous wants and are attempting to fulfill those wants by participating as consumers in the marketplace. Businesses are responding to these young people by providing more products and communications targeted to this group (McGee, 1997; Reese, 1997; Zollo, 1996). Preteens are responding by finding more ways to obtain money to purchase these new items, many of which carry hefty price tags. How preteens earn money is determined by family demographics, values, and lifestyles (McNeal, 1992).

Method and Results

A questionnaire containing 30 questions was designed to gather information regarding preteen sources of income, amount received, and family demographics. There were 221 students who attended middle schools in Central Illinois and 259 students in Upper New York. The students were 9-14 years of age. Income sources for these preteens consisted of an allowance, gifts, chores, grades and garage sales. The type and amount of money received was dependent upon family demographics, values and lifestyles.

Nearly half the sample received income in the form of allowance. The average weekly allowance was $4.25. Female preteens reported receiving $3.11, on average, whereas, male preteens reported receiving $5.63. Nearly two-thirds of the sample earned income from performing chores for parents or neighbors. Females received $3.44/week, whereas, males received $2.14. One explanation for the females receiving a higher weekly income from work could be greater opportunity to babysit.

Ninety-one percent of the sample received some income from gifts and almost 50% obtained money from participating in garage sales. Only 17% of the sample received income from school grades. This would indicate that most parents refrain from using monetary incentives to motivate students to obtain good grades.

Using a Chi-square test for independence, at the 5% level of significance, the average male preteen allowance was significantly higher than female average allowance. These results would indicate that gender income discrimination occurs at a very early age within families. This socialization of inequality of income based on gender may be an important precursor to continued pay differences in the labor market. Eliminating gender income discrimination in the workplace would require that families provide a more equitable distribution of income to their daughters and sons.

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Consumer Interest Annual *Volume 44, 1998*

Consumer Group, Consumer Friendly Media, and Consumer Complaints: Helping Limited-English-Speaking Population

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Ethnicity is an important aspect of consumer complaining behavior research. This poster focuses on Chinese new immigrants. The purpose of this poster is to describe an emerging informal community network in San Francisco area that helps Chinese new immigrants in consumer complaints. The network includes Consumer Action, a consumer advocacy group that is the first institution accepting consumer complaints in Chinese, and several Chinese newspapers and radio programs that pay special attention to consumer issues and rights.

Consumer Action and Consumer Friendly Media

Consumer Action (CA) is a nationwide famous, California-based consumer advocacy group. In 1989, CA launched bilingual services in Chinese and Spanish, which drew an immediate attention from the Chinese community where consumer education is scarce but needed very much. In addition to outreach and telephone hotline services in Chinese and Spanish, CA provided educational publications in five languages: Chinese, Cambodian, English, Spanish, and Vietnamese. As part of its outreach effort, CA worked closely with minority media, particularly Chinese, as Chinese is the major immigrant population in California.

Since CA started to provide bilingual services through its hotline and publications, the demand from Asian immigrant consumers, especially Chinese, for informed decisions has grown fast. Chinese media has started to play a vital role to empower consumer rights. In 1993, a column named "A Window for Consumers" began in Sing Tao Weekly, which later was expanded to a full page once a week. A Cantonese live radio show discussing consumer rights, "Sino Cast", was also developed in a cable radio station. Two live radio programs on consumer rights were developed first in Cantonese in 1996, then in Mandarin in 1997. Meanwhile, several major Chinese newspapers published in the States, such as Sing Tao, World Journal, and Chinese Daily News have begun to cover consumer interest issues and work with Consumer Action's staff to provide consumer alerts to the community. The media outlets also started to receive readers' complaints regarding their consumer problems and sometimes got involved in resolving the disputes. Although there is no official section set up in the newspapers to accept complaints and provide mediation, the news reporters' roles have slightly changed from merely covering news to investigating complaints.

Consumer Issues and Complaints

According to the staff working at Consumer Action hotline, the complaining subjects and percentages from Chinese-speaking consumers, based on 315 complaints called in between December 1996 and August 1997, were estimated as follows: automotive 30%, travel 19%, insurance 19%, long distance slamming 16%, credit card fraud 14%, and other 2%. It is interesting to compare the complaints called to the same hotline by English-speaking consumers in the similar time period. Among 567 English complaint calls between August 1996 and August 1997, the complaining subjects and percentages were as follows: credit and finance 30%, automotive 10%, product and retail 8%, utility and telephone 38%, and other 14%. Compared to English-speaking consumers, Chinese-speaking consumers were more likely to report automotive related problems and less likely to complain telephone and credit card related problems. A unique consumer problem among Chinese and other Asian new immigrants is "affinity scam." When such incidents occur, minority media usually is in a better position to help handle the complaints because they speak the same language, and their involvement often creates concerns for businesses about their reputation or practices. In some way, the minority media has actually stimulated the consumer movement in the Asian immigrant community through its coverage, investigation, and networking with consumer advocacy groups.

Endnotes

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Life Insurance and the Newly-Married Couple: A Pilot Study

Oftentimes insurance agents target young newly-married couples and may take advantage of their lack of knowledge of life insurance. This study was undertaken to assess newly-wed couples' knowledge of life insurance, purchase decisions, and their shopping behaviors. Findings indicate that most respondents are knowledgeable; however, there are indications of inefficient purchasing.

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A *Consumer Reports* publication states that many life insurance agents sell policies with high commissions rather than policies which fit their clients' needs, and that agents discourage consumers from comparison shopping (Liberman, 1988). Such types of selling behavior underscore the need to educate consumers. Consumer information is critical for newly-married couples, because marriage is associated with increased expenses and debt. A policy which suits one's needs could protect a family's assets from being sold to cover outstanding debts (O'Donnell, 1991).

Methodology & Findings

A random sample of 512 couples was drawn from 1997 marriage license applications in Athens-Clarke County, Georgia. Fifty-nine couples responded to a mailed questionnaire. Most (84%) of the respondents were white, with and 44.8% having incomes greater than $50,000 and over three-fourths possessing a 4-year degree. Eight of the 44 respondents, and 12 of the 37 spouses, with policies did not know what type of life insurance they owned. Most primary policies were term insurance policies. One-fourth of respondents and 27.0% of spouses' primary policies were whole-life policies. Forty percent of the respondents answered more than 90%of the knowledge questions correctly. Over one-third of respondents and spouses owned a policy through their employers. Less than half of respondents and spouses owned polices purchased from an agent. Almost eighty percent of the respondents did not compare policies or prices before making their purchase, and 59.3% read no financial literature prior to the purchase.

Conclusions

Most respondents did not search for information but were knowledgeable of life insurance; however, some respondents listed accidental death policies as a primary life insurance policy, and others did not know what type of life insurance they or their spouses had. Given that most respondents did not engage in comparison shopping, some may have been persuaded by agents into buying whole life policies. Future research is needed with a representative sample of newlyweds. Additional analysis should be performed to investigate the relationships between knowledge of life insurance and other factors associated with newlyweds. The study reported here is a first step in establishing baseline information about newlywed's purchasing decisions regarding life insurance policies.

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Endnotes

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Average Versus Worst Case Projections of Retirement Portfolios

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The asset allocation decision for retirement is one of the most important financial decisions of a household. This decision has become more important due to the increase in the prevalence of 401(k) plans and related retirement saving programs, and the decrease in the use of defined-benefit plans since the 1980s. Typically, financial planners use average rates of return and risk measures in recommending asset allocations for their clients. However, investors often invest for particular time periods and these time periods may have unusually high or low rates of return on assets. Therefore, both a pessimistic return and an average return from an investment should be considered, especially for long term financial planning goals such as retirement. This study focuses on average versus worst case projections of current financial assets and investigates factors associated with the difference between the two. This analysis contributes information relevant to public policy discussions related to pension plans, and to specific investment strategies for future retirees. This study uses household data from the 1995 Survey of Consumer Finances and data for the historical rate of return from Stock, Bonds, Bills and Inflation Yearbook (1995) published by Ibbotson Associates. Historical rate of returns for different assets over a 69-year period (1926-1994) are used to project financial assets in this research, assuming that the historical behavior of returns during the past 69 years accurately represents the behavior of rates in the future. All financial assets have a range of possible real accumulations. For instance, during the 1926-1994 period, an investment in a large stock index fund of $1 per year (in constant dollars) for a 20 year period would have grown to $50.24 on the average, but in the worst 20 year period, that investment would have only grown to $18.42. Therefore, the worst case accumulation is 37% of the average accumulation. In this study, 1, 660 households with a non-retired householder age 35 to 70 years, positive non-investment income and positive current financial assets were analyzed. The ratio of the worst case total accumulation to the average case total accumulation is 0.54 at the median (for more detail, see the full paper at the web page www.hec.ohio-state.edu/hanna/sh/yuh.htm). Thus, financial assets projected using the minimum historical real rate of returns are about half the size of financial assets projected using the average historical real rate of returns. The ratio for the individual households in the sample ranges from 0.32 to 0.84. A regression analysis of the ratio on household characteristics was run. Independent variables used in the regression analysis include the log of non-investment income, household types, race/ethnicity, risk tolerance, defined-benefit ownership, and the number of years until retirement as a proxy for the investment horizon. Since a non-linear relationship was expected between the ratio and the investment horizon, six dummy variables are used to capture the effect of the number of years until retirement. Non-investment income, risk tolerance, and being more than 5 years from retirement had negative effects on the ratio. Households with high non-investment income were more likely to choose more aggressive financial instruments such as stocks, which will produce larger differences between the worst case and average case projections. For the same portfolio, a relatively longer investment horizon should result in a higher ratio, as variability is reduced. However, if those who are closer to retirement have more conservative portfolios, then there may be a non-uniform relationship between the ratio and the number of years until retirement.

Even though stocks have a higher variability than bonds, workers should include stocks in their retirement portfolios. Hanna and Chen (1996) showed that workers more than 20 years from retirement should invest in mutual funds that are 100% small stocks. However, care should be taken in projecting accumulations based on average rates of return. A worker saving enough for retirement based on average rates of return will be running a risk of doing much worse than projected. Consideration should be given to use of the ratio of the average to the worst case projection in the retirement planning process. This paper demonstrates the possible danger of assuming mean rates of return in projecting retirement savings. For a young worker, it may be adequate to assume the average rate of return on a portfolio, if the situation is reviewed every 5 years. If the portfolio has done worse than the historical average, then standard financial calculations will result in an increase in contributions to the retirement fund.

Endnotes

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Economics and Nutrition: A Successful Partnership

This Invited Papers session was sponsored by the Southern Regional Research Project, S-278, entitled "Food Demand, Nutrition and Consumer Behavior." The collection of papers in this session, represents some of the exciting research conducted individually and jointly by members of the S-278 project. In addition to the papers summarized here, two more papers were presented: "Dietary Quality Indices: A Comparison Of The Healthy Eating Index And The Diet Quality Index," by Pamela S. Haines, University of North Carolina, Chapel Hill, and P. Peter Basiotis, U.S. Department of Agriculture, and "Consumer Decision Making Of Various Ethnic Groups," by Dorothy Z. Price, Washington State University.

Introduction

Chung L. Huang, University of Georgia[1]

The S-278 project represents a long history of collective and collaborated efforts among many researchers across the nation who share a common interest in addressing consumer demand issues. However, the initiation of the S-278 was of particular significance. It represents a new milestone and a new era of collaborated regional research efforts. Prior to S-278, all its predecessor projects have primarily a single disciplinary focus and most, if not all, of its representatives and participants are agricultural economists by training. During the new project initiating period, members of the former S-216 Technical Committee recognized the importance and the need for a multi disciplinary research project to study food consumption, food habits, nutrition and diets, and related policy issues. A decision was made to recruit new members and researchers from other disciplines to join the project.

As a result, the S-278 project approved in 1997 by the Southern Directors has become a regional research project, which is truly multi disciplinary in nature designed for addressing and solving various food demand related issues and problems. Its membership currently consists of a critical mass of representation from various disciplines including agricultural, consumer and family economists, nutritionists, and other social scientists. In October 1997, a plan to share research findings, and to seek feedback and interactions at national professional meetings was proposed at the first S-278 Technical Committee meeting in Coeur d'Alene, Idaho. The title of this section and the papers presented attest to this collaborated multi disciplinary research endeavor. We are indebted to Dr. Peter Basiotis for taking the initiative and responsibility of organizing the session and, particularly, to the ACCI for providing the opportunity and a forum to publicize and disseminate our research results and findings at its annual meetings.

Factors Affecting Consumers' Confidence in Food Labels

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Similar to claims made in advertising, nutrition claims or labels prominently featured on food packages may create consumer expectations about product healthfulness. However, the proliferation of these food labels could have confused some consumers. For example, a total of 76 percent of respondents to a 1995 consumer survey agreed with the statement that too many foods claimed to be healthy. Moreover, since the criteria for the absolute terms used in these food labels (e.g., low, extralean) by the Food and Drug Administration do not vary by product category, high-fat food categories, such as mixed foods, cheese, and various baked goods, do not have access to simple absolute nutrition claims to highlight the better aspects of the products in terms of other nutrients. Nutrient criteria regulations make it difficult as well for some products to make a nutrition claim due to certain requirements concerning the appropriate amount of nutrient mentioned in the claim. These restrictions may limit the building of awareness as well as hinder the quality of consumers' choices. Moreover, if food labels appear on products that do not meet some global standard of healthiness, then consumers may feel misled and may then provide judgments on the credibility of the claims. This issue may make it more difficult for consumers to rely solely on the food labels in their purchase decisions.

If consumers have confidence in the reliability of these claims to help them choose the right foods to buy and eat, then truthful nutrition claims on food packages may be more helpful in alerting consumers to food products they might consider further in their efforts to improve their diets. However, if consumers do not have much confidence in these labels, then the effectiveness of these claims is diminished. Further, it has been suggested that if consumers remain skeptical while operating under the NLEA environment, then they are likely to be pessimistic about the nutritional quality of food products, which in turn reduces their information acquisition activities.

It is, therefore, important to know the factors affecting consumers' confidence on these food labels. Scant information, however, is available addressing this topic. To fill this void, this article examines the effect of sociodemographic factors on consumers' confidence about the reliability of nutrition claims on food packages. The study leading to this article relies on USDA's 1994 "Diet and Health Knowledge Survey" (DHKS). Improved knowledge of the relationship between sociodemographic factors and consumers' confidence on food labels is useful in the design and implementation of nutritional education programs. Accordingly, the findings of this study could be used as a guide in directing government nutrition information programs toward specific population subgroups. If indeed, some demographic groups are less likely to be confident about the reliability of food labels as a basis for choosing foods, then it might be important for nutrition education programs to target these individuals in an effort to make them more aware and confident about the reliability of these nutrition claims due to the passage of the NLEA. It might also persuade policy makers and legislators to revise regulations pertaining to these labels. Furthermore, food marketers can tailor their products with nutrition claims toward those more likely to be confident about the reliability of the particular type of food label.

Results of the present study generally suggest that older, less educated, male individuals as well as those who placed less importance on nutrition when food shopping are less likely to be confident about the reliability of food labels as a bases for choosing foods than others. These results have some important implications for government education and public nutrition programs. The findings in this study could be used as a guide in directing government education programs toward specific population subgroups. For example, food labels may receive less attention from less educated male elderly people who place less importance on nutrition when food shopping. This finding is relevant considering that these elderly individuals may subject themselves to unnecessary health risk if they buy and eat foods with undesirable nutritional content. Hence, public health education programs should be targeted toward these individuals.

Results of this study may also be used as a guide in the design of food marketing programs. For instance, foods which are labeled with nutritional claims may be more valued by younger, well educated female consumers than others. Therefore, advertising and promotion campaigns may be directed at these individuals.

Food Expenditures And Dietary Quality Impacts Of Welfare Reform On Food Stamp Households

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Eileen T. Kennedy, U.S. Department of Agriculture[5]

This paper examines the contribution of the Food Stamp Program (FSP) and the Special Supplemental Program for Women, Infants, and Children (WIC) to maintaining the nutrition security/diet quality of low-income participant households. We examine this issue in the context of recent welfare policy reforms that have emphasized moving people from welfare to work, and have replaced the federal Aid to Families with Dependent Children Program with the more limited state-administered Temporary Assistance to Needy Families Program. Federal food assistance programs were retained as a nutritional safety net, but in some cases access and benefits have been restricted. We examine the hypothesis that participation in the FSP and/or WIC is an important factor in maintaining and improving the dietary quality of low-income households. Using USDA's Healthy Eating Index, as an indicator of overall dietary quality, and its 10 component indices that examine more specific diet features, we estimate diet quality impacts of changes in FSP and WIC participation and benefit levels.

The methodological approach includes using the household Healthy Eating Index and its ten components as indicators of dietary quality and relating them to explanatory variables including the value of food stamps received and participation in the WIC program along with household size, annual household income as a percent of the poverty threshold, education of household head, ethnicity, race, geographic region, urbanization, and tenancy status as well as a control variable for household members' missing HEI scores. The ten HEI component models' estimated coefficients were restricted to sum to the coefficient of the overall HEI and estimated by Restricted Ordinary Least Squares using the SYSLIN procedure of the Statistical Analysis System (SAS) version 6.12.

Results presented include both the means for the independent and dependent variables and estimated regression coefficients. Among the results were descriptive statistics such as the percentage of food stamp households with at least one member participating in the WIC program (19%); the proportion of female-headed food stamp households (71%) compared to 53% of all low income households and 46% of non food stamp households; the average weekly value of food stamps received by food stamp households ($34.22); the lower mean income of food stamp households (65,71% versus 87.93% of the poverty level). Results suggest that both programs contribute significantly to maintaining and improving the nutritional well being of low-income households. The value of food stamps received has a large and statistically significant impact on overall household diet quality controlling for other factors. For each $1 of food stamp benefits received, the aggregate household HEI score increases by 0.22. At the average weekly benefit level of $34.33 this means an average household increase of 7.5 points. Food stamp households without benefits would have worse HEI scores than non food stamp households. As they receive benefits, household HEI scores begin to catch up with non-food stamp households. The break even point at which household food stamp benefits bring the recipient households to the level of non participating food stamp eligible households is estimated at $17.54 per week. Because some 32% of food stamp participating families receive less than $17.54 per week, these households appear to be worse off nutritionally than non participating food stamp eligible households. Households receiving food stamps valued above $17.54 demonstrate higher HEI scores than non participating eligible families. WIC participation in the household had a strong, positive aggregate impact (+23.45 household HEI points) on household dietary quality. WIC participation appears to improve component scores for diet components included in the WIC packages, for example dairy and grain, and also components not included in the WIC packages, for example fruits and possibly vegetables. Receipt of the WIC package frees up food stamp and other resources to purchase other items. Additionally, WIC nutrition education may contribute to increased purchase of fruits and vegetables.

Endnotes

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Consumer Education in China

Consumer education is needed for improving consumers' position and protecting consumers' rights and interests. It is also needed for promoting social civilization and social progress. In China, consumer education appeared quite late but become more popular in recent years. This paper presents the importance, current situation and experiences of consumer education in China. It also presents the roles of government and the possibility of international cooperation on consumer education.

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Emerging Market Economy Needs Consumer Education

With the development of a market economy, more brands and varieties of goods and services are available to consumers. The consumer markets have greatly changed. Especially today, rapidly developed science and technology penetrate into consumer's daily lives through numerous new products and services. This situation requires consumers be intelligent and understand modern consumption knowledge. Otherwise, they cannot enjoy the benefits brought by modern science and technology and may be ripped off or hurt in the market. Thus, it is necessary to educate consumers to improve their consumption knowledge bases and to raise their self-protection consciousness so that they can become more competent and smart consumers. In sum, consumer education reflects the need that results from the changing consumption levels to improve consumption quality.

The market economy is about equal competition. Both the producer and consumer are competing in the same market environment. But the consumer is often the weaker party, especially in China, since the market system, mechanism, and laws are just starting to be developed. The markets are flooded with fake and poor quality goods. Consumers' rights and interests are often infringed upon. In order to strengthen consumer's position in the market for fair competition, consumer education should be widely offered to allow consumers to acquire knowledge of modern consumer goods and changing markets. Consumer education also helps increase consumers' ability of self-protection and civilization in consumption.

Furthermore, the integration of economical and cultural factors is a current trend in social development, while consumption is an important aspect that reflects the integration. The civilized, scientific, and socially desirable consumption activities and lifestyle are the inevitable trend in modern society. The integration of economical and cultural considerations must be practiced by consumers, be reflected in people's consumption behavior, which can be achieved through consumer education to improve consumer's knowledge base and persuade consumers' willingness to do so. Thus, consumer education is not only needed for promoting consumption civilization but also for promoting social civilization and social progress (Yin, 1992; 1997).

Recent Development of Consumer Education in China

In 1984, the China Consumers' Association was established. After that, staff members of consumer associations became aware of importance of consumer education and began to conduct consumer education consciously (Yin & Xiao, 1997). In recent years, with the development of a market economy, consumer education has been developed fast and great progress has been made. For example, in Dafeng, Jiangshu province, systematic consumer education courses have been offered and consumption knowledge was taught in primary and middle schools since 1990. In state-run working units, many consumer education activities in various forms were conducted. They incorporate consumer education into their business work, "human resource quality education", and legal education programs. They also incorporate consumer education into the educational programs that updating country's economic and political conditions (Education Bureau of Dafeng County of Jiangshu Province, 1992). These programs are both for children and adults. The consumer education is considered as an important part of human resource quality education.(Consumer Association of Jiangshu Province, 1995). The students also conducted social investigations about consumer education. Through these activities, they got better understanding of production processes and the society.

The methods for consumer education are flexible. For example, for the children of preschool and lower primary school, consumer education activities are conducted in the forms of children's songs, nursery rhyme, and dancing performance. For older children in primary school, some elementary knowledge on consumption and laws are taught. Several textbooks on consumer education are published for the primary and middle school students.

In Jiangshu province, many department stores have conducted consumer education among their workers. They learn commodity knowledge, market information, consumer psychology, and economic laws and regulations. In this way they have learned the knowledge of consumption and laws and improved their service quality. The textbooks on consumer education were compiled and published based on examples from many companies in the province, which promoted the work of consumer education. In Donghai county of Jiangshu province, consumer education for rural households has been conducted in the form of evening school. In such schools, the laws and regulations on consumer protection and the knowledge of scientific consumption are taught and over 400,000 people have been educated. In regions such as Changzhou and Dongtai, consumer education is conducted among households. After such education, the consumers have gained consumption knowledge and methods how to protect their own rights and interests.

In Shujiatun district of Shenyang City, consumer education is conducted in all the schools and kindergartens. Consumer education has been combined with the education of moral, intellectual, physical, and aesthetic development. They put consumer education into the whole education reform. The district established a leadership group for consumer education work so as to promote the district's consumer education. The district has incorporated consumer education into patriotism education and nation's traditional virtue education programs. The district has set "the Consumer Education Program" and published textbook on consumer education for middle schools. Over 1200 children's songs or stories are compiled for consumer education. In Liaoyang, Liaoning province, consumer education started in 1989. The work for consumer education was first undertaken among children, then spread to adults. The focus for consumer education is consumer laws and regulations. A completed system of consumer education from children to adults is gradually established.

In Heilongjiang province, the Consumers' Associations at various levels conducted consumer education including knowledge of consumer protection laws, commodity, market, consumption, consumer movement. Many textbooks, audio or video tapes on consumer education are published and distributed among consumers. In this way, consumers improved their awareness of their own rights and interests, enriched their knowledge of consumption, and understood consumption activities in appropriate ways. More than 80% of the consumers in the province have been educated. In Leting, Hebei province, consumer education is conducted among most consumers in the county. Several textbooks on consumer education are published. The courses on consumer education are offered in all schools and kindergartens of the county. More than 100 schools in Hebei province offer consumer education courses. In Leting, consumer education is in the forms of evening school and consumption consultation. The Educational Committee of Hebei Province and the Consumers' Association of Hebei Province are planning to offer consumer education in all the primary and middle schools in that province (Chinese Consumers, 1996).

In Zhuhai, Guangdong province, Golden Coast Middle School began to offer a two-semester course since 1992. Consumer education has been taught in many ways such as social investigation, organizing a discussion titled "Consumption and I", displaying the false and poor quality goods in the class, and so forth. In these ways, consumer education becomes vivid and very popular. After such activities, the students see that consumption means not only spending their money but also a special knowledge. The students' awareness and ability of self-protection have also been enhanced. The students get to know how to protect their own rights and interests by law.

The examples like those above are numerous, which indicates that consumer education can not only enhance consumer awareness and increase their consumption power, but also greatly improve their ability of self-protection. In 1996, the total number of consumer complaints was over 500,000, which is 75 times more than that in 1986. The sharp rise of consumer complaints means a fast increase of goods and services and related problems. It also means, in the other hand, the improvement of consumer's awareness of self-protection and consumer's awakening, which may be the results of consumer education.

Experiences of Consumer Education in China

China started consumer education less than 10 years ago. The main experience can be summarized as follows.

1) The purpose of consumer education is not only to enhance consumer's knowledge of commodities and market, to improve their ability of self-protection to be an intelligent consumer, but also to make consumers to conduct healthy and socially desirable consumption activities, to incorporate consumer education into human resource quality education to improve people's quality as a whole and to become a smart and responsible modern consumer.

2) The contents of consumer education include not only modern knowledge of commodities, market, and consumption, but also consumption value and social ethics; it include not only knowledge of laws, but also that of environment protection to improve their awareness of environment protection so that they can preserve the beautiful consumption environment consciously.

3) The forms for consumer education are various and flexible. The choice of the forms are decided according to the places and the consumers. Besides the formal consumer education in school, we use the mass media or social education for consumer education, and also conduct consumer education for adult in the society .

4) Consumer education for children. We take the education in primary and middle schools as the basis, the education for adults is the focus.

5) A comprehensive consumer education network. We are trying to conduct consumer education in a systematic way and to set up a consumer education network, which needs attention from the whole nation. We tried to use all factors including governments at various levels; the social organizations and the media. It can be predicted that with the development of market economy, the consumer education in China will continuously expand and deepen, from city to countryside, from educational institutions to society, from school to university. A complete network and a comprehensive educational system will be established, which can serve the development of market economy.

6) At present, the consumer education in China is mainly advocated by China Consumers' Association and its local branches, who cooperate with education institutions to conduct consumer education in schools as a test. This is a relatively comprehensive and systematic form for consumer education. The consumers' associations co-organize lessons on consumption knowledge and consumption laws with media (such as television and broadcast). Under the advocate of consumers association, some enterprises also conduct consumer education.

We are to emphasize that the consumer education in China is only at its beginning. But the mass education on consumption laws and consumption knowledge has achieved a lot — the consumers' awareness of laws and self-protection have been greatly improved. But there are still some problems on consumer education in China. It is difficult at present to put consumer education into the courses of schools and universities all round. The reasons are: first, the education sector, the society and the consumer itself haven't reached the same view that consumer education must be put into the formal educational programs, which mainly because many people think that consumer education is a social education instead of school education and they haven't seen the results after a long time's formal consumer education in school (our consumer education has been taken only a few years ago). Second, we lack such textbooks and teachers with high quality that fit China's condition for the school formal courses at present. Third, we lack enough financial support for consumer education. China has no much money to put into consumer education. And thus we need: 1) the government, the educational department and the whole society pay more attention to consumer education and support consumer education; 2) establish a support center supported by the enterprises for consumer education and its research; 3) increase the international cooperation on consumer education and take in the experiences from developed countries on consumer education.

How to Improve Consumer Education in China

1) Encourage government to take actions. The services of consumer education should be considered as one of consumers' rights. We should consider it as an important component of people's quality education. Consumer education plays an important role in human development and social progress. We should treat consumer education in a strategic perspective and consider it would benefit the economic and cultural development of the country. Consumer education should be conducted by organizations and institutions at various levels, especially by government sector. We should, like some developed countries, establish special institutions in charge of consumer

education (many states in the U. S. have policies to let schools offer consumer education curricula). Our government should also establish such institutions to lead and promote consumer education.

2) Introduce consumer education into school systems. Bring it into the basic national education system so that it becomes a component of basic courses of our educational system like some other Asian countries. For example, Malaysia and Hong Kong offer consumer education courses in most primary and middle schools. Japan required consumer education in all primary and middle schools (Qi, 1997). Our educational department should consider a comprehensive program. For example, to offer consumer education courses in primary and middle schools and set the special hours for the courses. The contents of the courses should include consumption value, consumption ethics, reasonable consumption behavior, aesthetic education besides consumption knowledge, consumer laws and regulations, and consumer protection. In universities and colleges, there should be such field on consumer education so as to train professional persons in this field. We should use the social and government network for the work of consumer education and establish a "pyramid consumer education system."

3) Combine consumer education with consumer protection. In China, there are numerous cases on consumers' being hurt. But many people have less awareness of self-protection, especially in the countryside. One of the focuses in consumer education is to improve consumers' awareness and ability of self-protection. Using real cases to conduct consumer education will make it more vivid and effective. After being aware of their own rights, consumers can not only improve their ability to protect themselves, but also improve their own quality. We should make great efforts to conduct consumer education so as to enhance consumer's awareness of market economy and consumer's rights and interests, especially in the countryside and less developed regions.

4) Mobilize the whole society to undertake consumer education. Consumer education is not only the work of government or consumers' associations, but also that of the whole society. We should take effective measures to mobilize the whole society, including individuals, companies, non-profit organizations, mass media, and other organizations, to support consumer education in different ways so that our consumer education becomes the activities of the whole nation and the impetus to push the market economy forward.

5) Increase the international cooperation. China started consumer education very late compared to developed countries. We should learn from other countries' experiences and improve our work. We should also increase the international cooperation in this field, such as participating in international activities on consumer education, holding international conferences, undertaking international cooperative research projects on consumption economics and consumer education, and conducting experiments on consumer education in China with the help of experts from other countries. Thus, we can do better in consumer education and contribute more to the development of consumer education in the world and to the social prosperity and progress of human beings.

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New Beginnings in a Venerable Country: The Indian Institute of Consumer Studies

Unconscionable abuses threaten the consumer in the Indian marketplace. The arrival of globalization provides opportunities but it also brings new threats from sophisticated sellers of products that are completely inappropriate. India faces two monumental tasks (a) creating the institutions for fair exchanges, and (b) providing consumer education to individuals who have long been powerless. The Indian Institute of Consumer Studies will provide new impetus in this struggle.

Jajie Mandana, Indian Institute for Consumer Studies[1]
Robert R. Kerton, University of Waterloo[2]

Introduction: Big Problems in a Big Country

India has 970 million citizens, including some 300 million of the most vulnerable consumers in the world. The arrival of globalization has added a new set of challenges to markets already seriously lacking a framework for fair exchanges. To get a fair framework for markets, Indians are in urgent need of a counterbalancing force to offset the pressures from dangerous products, unscrupulous sellers, protected monopolies, and poorly motivated or rude public servants. Change must occur against the powerful efforts of self-interested lobbyists attempting to create rules they like. Where can one find the missing consumer expertise? This presentation proposes one promising response to the question. For perspective, consider some of the problems in urgent need of attention.

Lack of Basic Consumer Rights

Access to the fundamental consumer rights is difficult for wealthy consumers in India. For many others, access is impossible. The right to safety is under insurmountable stress in any country that cannot supply the essential public services to guarantee clean water, basic transportation, effective health protection and other crucial components of life. What is the Aright to choice≡ when there is no sewerage system or if electricity is not available? For illiterate consumers, what is the meaning of the right to information or the right to consumer education? What is the right to redress for consumers without any of the institutions for fair market exchange?

Problems With Food Purity

For centuries most food has been produced close to home. The spread of the market has brought efficiencies but it has also brought a discouraging number off scam artists attempting to make a fast rupee. Many producing and selling practices are absolutely unconscionable. For example, far too often we find that food has been adulterated. By the best estimates possible, it has been calculated that about 25% of the food passing through Indian marketplaces has been adulterated. India now has a sophisticated system of firms supplying adulterants. One is an industry set up to produce stone chips which are perfect replicas of rice so that stones can be added to increase the weight. Wood chips can be purchased as accurate adulterants for wheat (Mandana, 1977; 1982).

Pharmaceutical Failures

There are two very different and very serious problems with pharmaceuticals in India. The first is that internationally produced pharmaceuticals are far too expensive for persons of average income. India has been a target for the U.S. under section 301 of the 1998 Omnibus Trade Bill. Part of this was the effort of some U.S. firms to make sure that the national industry in India discontinued to production of drugs whose patents had not run out in the United States. One result was a sharp increase in price which put most pharmaceuticals even farther beyond the reach of the average consumer in India. High prices are formidable barriers to health.

The second problem is the theft of active drug ingredients. In a few spectacular cases we learned to our horror of a novel type of corruption involving the replacement of a drug with a placebo so that the active ingredient could be sold on the black market. This scandalous behavior has received the attention it deserves in India. However, the resources available to the public sector for a drug inspectorate are too limited to ensure health protection.

Appropriate Products

The arrival of ever more novel consumer products makes one ask: What is so great about globalization? The economic drive to sell questionable products to an ever expanding marketplace has led to an outpouring of differentiated products bearing little connection to the consumer=s needs. The marketing savvy unleashed on unsuspecting consumers threatens the standard of living. One frightening example comes from the big pharmaceutical firms. The marketplace in India offered 44 brands of (non-steroidal) anti-inflammatory products. No fewer than twenty of these were **banned, restricted, or not approved** in industrial countries with drug testing labs (Kerton, 1990: 27).

Consider the example of neem sticks. The wood from the neem tree has a myriad of uses, one of which is as a type of tooth pick which has been used for centuries to clean the teeth (Mandana, 1982). Neem sticks are highly successful for oral hygiene. There is a plausible claim that the neem stick is superior to toothpaste, and especially so for creating healthy gums. Indians used to have all their teeth at time of death; this is no longer so. For five decades, Indian consumers have been bombarded with propaganda designed to get people to switch to toothpaste. Procter & Gamble and Lever Brothers are only doing what one expects: selling their product. Sophisticated selling techniques are skillfully deployed to convince Indians that the modern scientific method needs the marketed product. But is toothpaste really superior? Probably it is not, even at half its current price.

Is there great virtue in switching consumers from traditional juices to colas? From breast milk to marketed substitutes? From local skin care to western cosmetics? Is it right that the cigarette market in India must expand to compensate multinational companies for loss of markets in countries now enforcing laws on selling tactics?

The Core Constraint: Consumer Apathy

Experience has left most Indians with a sense of helplessness. There is a sense of powerlessness justified since childhood by almost every market and nonmarket transaction. Consumer training is necessary to encourage people to speak out when circumstances beg for correction. It is quite a challenge. Yet it is also the reason for a measure of optimism. Many will be familiar with the book by Albert Hirschman entitled: *Exit, Voice, and Loyalty (1970)*. In a market, a dissatisfied consumer can ≅exit≅ by leaving a brand or product (by refusing to repurchase the unsatisfactory item). AVoice≅ (acting or speaking out) is a more powerful tool. Voice is the basis of Hirschman=s thesis that institutions can be changed by challenges from citizens. He argues that institutions change in response to complaints or to other social action. So long as people suffer in silence, harm and the related agony will continue. The duties are onerous. However we already know some of the ways to achieve success - even with the most downtrodden of consumers.

The Good News: A Path to Solutions

The Karnataka Consumer Service Society (KCSS), one of the earliest consumer action groups in India, was founded in 1970 to address immediate consumer problems in the state of Karnataka. Several different types of consumer organizations are active in India any many have important successes to their credit (Singh, 1997: 312-16). Responsive and responsible consumers help improve the quality of services in the market economy. An active consumer movement thus helps promote the optimal use of resources and products. This assists quality changes that build a sound reputation for the country=s goods and services in the international marketplace. Many of India's top political leaders have recognized the essential role of consumers in the economy. More than fifteen years ago, Indira Gandhi demonstrated a strong interest in consumer rights - in fact she personally promised a national Indian Institute for Consumer Studies and provided the land.

The good news is that the **Indian Institute for Consumer Studies** (IICS) has been created and is now operating. At the moment, it is in temporary quarters. In May of 1998 a new building is under construction as a permanent home for the Institute=s programs (Indian Institute for Consumer Studies, 1998). The IICS is located in Bangalore, a city of eleven million people in central south India.

The Indian Institute for Consumer Studies (IICS)

The main objectives of IICS are to provide (a) training, and, (b) research facilities for all aspects of consumer-related activities. Trainees are engaged in a wide range of programs ranging from consumer education in schools to practical training for adults. Standards and testing methods will be developed and instructed. In addition, one of the most important activities is the program to campaign for issues including the right to information.

One of the fundamental tasks for a new national Consumer Research Institute is to bring people into small seminars in groups of thirty or so to teach them how to speak out. It is a huge challenge to convince the downtrodden that their action can make a difference. One successful tactic uses familiar - often outrageous - examples from daily life. Important changes have resulted from the action on one or two individuals upset about cheating or about repugnant sales practices. Through the use of examples based on local experience we have had visible success in *very* few days of instruction and participation. Often lessons are conducted as street theater.

Who are the participants? Trainees are from consumer organizations, government agencies, business enterprises proposing to develop in-house consumer services, panchayat members (village councillors), women's groups, school teachers, community leaders interested in organizing buyers= clubs, and selected participants from the poor in the larger cities. Key training initiatives have begun even before the first phase of the building is ready. One program brings thirty people from a mohalla (neighborhood) to the existing center for consumer education. In another current program, three people (identified as leaders) from each slum are brought to the Institute for training on community action. Trained Agraduates≅ carry the message their own neighborhoods.

Working with the Public Sector

A basic infrastructure is urgently needed. In Bangalore alone there are 470 designated slums, each with an average of 8,000 persons for a total of about four million slum dwellers in an urban population of some eleven millions. Each slum has the Aright≅ to free water and free electricity. In practice the public system has failed under the impossible burden. Among other things there is no provision at all for a sewerage system. In a single slum in Pillanna Garden, an experimental effort recently provided each dwelling with a hygienic toilet, and pipes to a covered sewage pit in the neighborhood. The experiment is a stunning success: human waste is no longer in the streets and passageways. In addition, families gained a gas supply from the biomass. The visibly cleaner environment is a source of pride. All this was achieved for $12,000, 75% from a donation by a Rotary Club and 25% from the users themselves. The demand from other slums to repeat the success is overwhelming.

While the private sector has been particularly imaginative in inventing novel ways to abuse consumers, many of the most serious afflictions are administered by suppliers from the public sector - and this is a sector which is quite large in India. The reputation of the IICS as a source of expertise has led to a series of requests for training.

- One example is provided by the bus drivers, long noted for rudeness and the capricious provision of service to customers desperate for transportation. The Karnataka State Road Transportation (KSRT) has contracted with the IICS to train 600 bus operators (out of 25,000 drivers). The KSRT will pay tuition of 600 rupees per trainee.
- The auto rickshaw drivers (who serve the middle class) have a reputation for rudeness. They sometimes refuse to go to reasonable destinations. All too often, passengers are subjected to robberies. Their association has called to seek training.
- The workers who read electricity meters are high-handed, often inventing a reading rather than inspecting the meter. In 1998 there is a request from the Federation of Karnataka=s Chamber of Commerce and Industry to have the Institute of Consumer Studies train meter readers in the principles of fair trading.

Consumer Courts

The greatest achievement of the Indian consumers= movement is that in 1986, some 42 years after independence, a new Consumer Protection Act (called COPRA) was passed. Before COPRA there were 38 separate acts which Aguaranteed≅ consumer protection. Redress was generally unavailable, though perhaps a few wealthy persons could succeed through the civil courts. The old procedures were time-consuming and expensive. The key change is a separate set of consumer courts set up under the Consumer Protection Act of 1986.

What does COPRA cover? Almost everything except, perhaps, medical care (Singh, 1997). The law addresses most rampant consumer abuses, including those of governmental bodies such as the railways, the Post Office, the water utilities as well as health and other public services.

To succeed, COPRA uses two strategies. First, it eliminates the requirement for legal representation. The intention is that any reasonably intelligent person can argue his or her own case in the consumer court, and with a little help from other consumers, this has usually turned out to be true. Second, it removes the congestion delays and the legal procrastinations so evident in the regular courts. Success is uneven but still evident. It helped that many of the judges shared the outrage of the consumer who had been wronged. And consumers are not the only ones who gain. The balance shifted from favoring sellers of shoddy, defective or adulterated products to sellers who deliver an honest product for an honest price. Consumer organizations have the right to intervene on behalf of individuals. Even so, consumer groups are mostly urban in a country that is mostly rural: there are frequent complaints about the distance that consumers have to travel to courts.

Education on Consumer Issues. Public Campaigns

India needs campaigns for clean drinking water, for transportation improvements, for other basic needs and for an understanding of how a market works. One clear example of a crucial campaign the IICS must mount concerns tobacco. Consider the massive advertising expenditures now being devoted to getting young people in India to smoke. The multinational tobacco companies are facing opposition on health grounds in developed countries so they are seeking to replace lost profits by pushing this completely inappropriate product in developing countries. This is a travesty of what the liberalized market system is supposed to offer. When South Korea opened its market in 1988 to sophisticated foreign sellers, smoking rates among male Korean teens rose from 18.4 percent to 29.8 percent in a single year. The smoking rate among female teens more than quintupled, from 1.6 percent to 8.7 percent. The World Health Organization predicts tobacco-related deaths worldwide will rise from three million to 10 million by the 2020s, with 70 percent of those fatalities in the developing world. Why is this to occur?

New Beginnings

The IICS is a forceful reaction to unconscionable abuses in the marketplace. As consumers, we can do far better than the present sorry state, but only if we act to assert the basic rights to information, to consumer education, to redress et cetera. At this juncture there is considerable reason for optimism. The creation of the IICS allows a deliberate response, one that helps to construct the institutions needed for the modern marketplace. The difficulties consumers face in India are monumental but by no means is every problem unique. A national effort to create original solutions combined with an international effort to share successful policies offers great promise. If we share research resources we can save precious time and avoid unnecessary anguish. Join this effort. The Indian Institute for Consumer Studies is a promising part of an important new beginning.

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Rules for the Global Marketplace

This session examined the feasibility of voluntary codes or international standards for consumer protection in the global marketplace. Representatives from government, business and consumer advocacy presented the issues from their different perspectives. In addition a case study about the application of internationally recognized quality management standards was presented. The remarks of the speakers and the discussion are summarized.

Allan Asher, Australian Competition and Consumer Commission[1]
Kernaghan Webb, Office of Consumer Affairs, Industry Canada[2]
Robert Kerton, Univeristy of Waterloo and Consumers' Association of Canada[3]
Marlene Futterman, Direct Selling Education Foundation[4]
Premavathy Seetharaman, University of Delhi[5]

Introduction

With the shift to a global marketplace, domestic consumer protection laws are often ineffectual and enforcing legal rights overseas for consumer transactions is not a viable option. The Australian Competition and Consumer Commission has undertaken research about the issues of the global marketplace and produced a major discussion paper on this topic entitled, " The Global Enforcement Challenge: Enforcement of consumer protection laws in a global marketplace". (Australian Competition and Consumer Commission, 1997). One element of this research is an examination of the potential use of international codes and standards for consumer welfare and a comparison of alternative rule-making bodies such as ISO, OECD, UN, trade associations, consumer associations, etc. Each of the speakers was asked to provide their perspective about the feasibility of this concept and to highlight other initiatives taking place to address consumer welfare in the global marketplace. Jeanne Bank of the Canadian Standards Association moderated the session. The remarks of the speakers and discussion are summarized.

Allan Asher, Australian Competition and Consumer Commission

While increased global trade benefits both consumers and traders, it also poses a number of problems. Differing requirements of jurisdictions have the potential to create non-tariff barriers to trade and make it difficult for law-abiding suppliers to comply with various consumer protection laws. The global marketplace exposes consumers to very different levels of protection and it hinders law enforcement activities against cross-border fraud. Traders can circumvent regulations by setting up in locations of convenience and offering services to consumers in other jurisdictions, being unaffected by the regulations of those jurisdictions.

Additionally, downsizing by governments means that self-regulatory mechanisms are preferred as there are limited resources available for administration or enforcement. It should also be recognized that there are aspects to the global marketplace, such as the flow of information, that may be impossible to regulate by traditional means. In this environment with a new emphasis on business ethics and the rise of consumer power, there is an opportunity to reshape the international regulatory environment and to develop a set of international norms of conduct which are market sensitive and flexible. Tools such as international guidelines, charters, standards and codes are really the only way that consumer protection standards can be developed and maintained in the global marketplace.

There are a variety of alternative rule-making fora and some of these are adopting quasi-regulatory roles by developing standards which may or may not have force of law. Five venues for international rule making are: 1.) United Nations, 2.) Other governmental cooperation bodies, such as the OECD, 3.) International standards setting bodies, 4.) International industry organizations and peak bodies, such as International Chamber of Commerce, and 5.) International non-governmental organizations such as Consumers International.

1.)The United Nations universal charter for Consumer Protection has become an international benchmark but needs to be updated and is currently undergoing revision. The United Nations has also spearheaded work to establish guidelines for global business, but similar efforts have largely failed in the past. However, these could address some of the public concerns about the proposed Multilateral Agreement on Investment (MIA), provided that they are developed using a transparent and multi-stakeholder approach.

2.)The OECD has an active Committee on Consumer Policy and offers an excellent opportunity for international cooperation in the development of consumer protection policy guidelines. One area currently underway is the development of guidelines for electronic commerce.

3.)International standards setting bodies have a longstanding involvement in the development of international technical and safety standards. In recent years, these organizations have also responded to requests to develop international standards for business management systems or best practices. For example, ISO is developing standards on environmental management and Codex Alimentarius is developing food standards. The discussion paper developed by the Australian Competition and Consumer Commission identifies the following subject areas as potential areas for standards work about the global marketplace: complaint handling; codes of conduct; charters; compliance; and criteria for a "quality trader". Many of these subjects are already addressed at national levels (eg. Australia has a successful voluntary standard on complaint handling). The development of similar international standards would help to harmonize consumer protection standards on a global basis.

ISO has a proven track record for producing market-based and market-accepted standards, including the 9000 series for quality management and the 14000 for environmental management. The standards are voluntary and developed on a consensual basis with input from all stakeholders. The process for development is highly transparent and ISO is truly international, unlike organizations such as OECD which have limited membership. ISO has a high profile and a good level of credibility with stakeholders. The process is relatively cost effective, especially for developing countries where the cost of developing their own standards is prohibitive.

4.)International industry associations and peak bodies also have an important role to play in rule making and some initiatives are underway, such as the International Chamber of Commerce's code for advertising practices.

5.)Consumer organizations must have a clear and adequate "voice" at rule making forums to ensure adequate standards of consumer protection.

Kernaghan Webb, Office of Consumer Affairs, Industry Canada

Although alternative rule-making provides a potential solution to the problems of the global marketplace, there is also the potential for harm, especially if the interests of consumers are not adequately reflected through the process. The Office of Consumer Affairs has developed a guide for the development of voluntary codes and is a strong supporter of this approach. However, we need to examine their processes and determine if there is meaningful consumer input and work to improve this aspect. Those bodies with the most "consumer-friendly" systems should be the fora of choice.

While the ISO process is recognized as being quicker, less expensive, easier, and internationally accepted, compared to legal policy approaches, there are some concerns emerging about the ISO process. For example, the ISO 9000 series of standards for quality management are probably the most well-known and applied international standards. However, in recent years business has started to express concern about the costs to business of the implementation of these standards due to the 3rd party registration/audit process. With the introduction of the newer 14000 standards for environmental management, these concerns are increasing in business circles. Are these standards appropriate for small and medium sized firms? Additionally, the processes of standards setting bodies are often not flexible enough to meet the needs of stakeholders. For example, a system to allow small organizations to comply with the national privacy standard in Canada on a self-declaration basis with a use of a logo have not been made available despite requests from government and business.

There is also concern about the ISO process from the consumer perspective. Consumer participation and non-governmental organization involvement is not sufficient in many cases. However, competitive pressures may force ISO to address this issue. One example is the case of a forest management standard and certification program. A coalition led by environmental groups developed their own system at the same time as ISO was starting work in this field. At present, the system led by the environmental non-governmental organizations appears to be the dominant system in the marketplace. Consumer organizations need to get more organized and coordinated in their standards work. While barriers exist such as lack of resources for travel and volunteers, it will be important to achieve meaningful representation if we are to have the best standards possible. Consumer representatives need to be compensated for their participation in alternative rule-making, not just for their travel expenses but for their time and expertise.

Government has a variety of roles to play to support this new environment of voluntary standards and codes. First of all they must be prepared to enforce existing laws and regulations and they must act decisively and bring in laws when required. This vigorous approach will provide pressure to business to self-regulate. Government is a key information provider, providing guidance tools to business and identifying market failures. In addition, government can serve as a facilitator in the standards setting process, balancing and reconciling competing interests.

Robert Kerton, University of Waterloo and Consumers' Association of Canada

The recent move to globalization has two faces. The cheerful promising face offers consumers new goods and services at ever more reasonable prices and emancipation from local monopolies and restrictions. The ominous threatening face offers a new wave of useless and harmful goods and selling tactics. Even in countries with established fair trading laws, the arrival of borderless electronic commerce offers new opportunities for unscrupulous sellers to escape domestic rules. While the potential for voluntary codes as outlined in the Australian paper is impressive there are imbalances such as the stunning faith in industry codes along with the withdrawal of a framework for fairness. What is needed is a set of conditions which tell us whether a voluntary effort has promise or not.

Standards setting can be a concealment for opportunistic behaviour. While many believe that the Better Business Bureau is a model for self-defined standards, research shows that leadership at local BBB's is of differing quality. More importantly, the fee payment mechanism means that the BBB may be reluctant to present a negative report on its members. The worst sellers find it very useful to display their BBB sticker and as a result the self-regulation is a form of concealment which is highly valuable for opportunistic sellers.

Standards setting can also be a barrier to potential competition. A further problem arises when firms agree to establish a standard instead of introducing products which bring innovations by means of meeting different standards. The decision to compete or cooperate with emerging standards is a strategic choice. One solution is to introduce competition to the standards setting process. While it may be confusing to have multiple standards, there may be a need to have a baseline international standard, plus a higher standard developed by another standards body for those firms who are interested in signaling that their quality meets that higher level.

One of the key elements missing in most voluntary standards is a procedure for a standard for redress. The absence harms the sellers who do provide everything promised while signaling other sellers that there is no penalty for malfeasance. Requiring standards-setting organizations to include a standard for redress within other standards is a method for setting expectations for customers and sellers and will enhance the operation of the global marketplace.

In addition to redress, there is a need for criteria to assess a proposed standard for its potential success with consumers. Transparency is an essential element. Needed too, is a means of measuring success or failure and an agreed-upon method of compliance. A consumer purpose test would be an important contribution to the international standards system.

The march towards globalization has proceeded with an arresting lack of balance. One area to concentrate our efforts is in the development of standards for the area of settlement of international financial transactions. The first step with each international standard is a method of making sure that consumers are included in the establishment of any standard being set, supported by a protocol to help assess the acceptability of any proposed standard.

Marlene Futterman, Direct Selling Education Foundation

Ms. Futterman provided an overview of the history and scope of the United States Direct Selling Association Code of Ethics and the corresponding World Code. The U.S. Code was developed in the late 60's and early seventies at a time when there were problems within the industry and the government was threatening to introduce legislation. The industry was under pressure from consumers and government to set ethical standards. Since that time the Code has constantly evolved and become stronger.

The U.S. Code provides protection to both the salesperson and the consumer. The provisions for the salespeople are more recent additions but are a very important component of the Code. As far as consumer protection, the Code sets out rules covering: testimonials and claims, truthfulness of product/service aspects, terms of sale, warranties and guarantees, privacy of personal information, and provisions against any pyramid schemes.

The Code has a strong enforcement component. There is an independent administrator to investigate complaints and recommend appropriate action. The complainant is not forced to wait for redress - the administrator can authorize immediate financial reimbursement up to $500. If the member company does not comply with the findings of the administrator the complaint may be referred to appropriate government body or there may be action initiated to expel a member company in serious cases.

The World Code is endorsed by 50 Direct Selling Associations that make up the World Federation. It provides global coverage and in some cases it is more stringent than the US Code - eg, the European cooling off period is longer than in the U.S. Like the U.S. Code the World Code is strongly enforced. There are 26 independent Code Administrators. In addition, if there is no national Direct Selling Association in a particular country, the U.S. Code will exercise jurisdiction if the salesperson represents a U.S. member company.

While the Direct Selling Association is a strong advocate of international voluntary codes and standards, there are a number of questions that need to be addressed:

- How do you harmonize standards so that business is not affected adversely? For example, international labelling requirements may create severe problems for business.
- While voluntary standards and guidelines are a good step, it is essential that they are supported by a rigorous enforcement process. How can international voluntary standards achieve this?
- Where should we focus our efforts first? - the development of standards to prevent abuses in the global marketplace - or establishing a redress process for electronic commerce and the Internet.

Case Study: Premavathy Seetharaman, University of Delhi

The adoption of internationally accepted international standards for quality management has been widely promoted in Indian industries, but the application in the textile industry has been relatively slow. A study was conducted on two textile mills to look at the impact of implementation of ISO 9000 standards, including: cost and effectiveness. For both these firms the rationale for ISO 9000 registration was export requirements plus the desire to enhance their status in the industry.

From studying these two examples, it was clear that successful implementation requires management commitment and determination. The gains of implementing the standards were significant, including streamlining of the processes, improved productivity, and increased employee morale. It was found that one of the mills experienced a 75% increase in exports following registration.

In order for textile mills to survive in the rapidly changing business environment and to compete in the global market, it will be in their interests to take the initiative and adopt international standards.

From a consumer perspective, there are several issues that need to be addressed. The most important is that the average consumer does not understand what ISO 9000 registration means. How should this be communicated to consumers? What claims can registered firms make to consumers? More research is needed to address the impact of these standards on the end consumer.

Discussion

The discussion focused on a number of issues about the appropriateness of international voluntary standards for the area of consumer protection and the harmonization of standards. Concern was expressed that this would simply result in the lowest common denominator and that consumers may lose existing protections. It was pointed out that we must strive to harmonize upwards and to move to what is desirable rather than what is customary. It was pointed out that the move to international voluntary standards offers opportunities but the abilities of the standards setting bodies are often not sufficient to carry out the promise. Key elements such as transparency of the process and adequate consumer representation are often not adequate. The other key question for consumers is how to know whether these approaches are working. The application of these standards through supervision or labelling schemes costs money and this is passed on to the consumer. However, no resources have been put into evaluating the effectiveness for the consumer.

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Data from the Continuing Survey of Food Intakes by Individuals for Policy Decisions

The U.S. Department of Agriculture conducts nationwide food surveys that provide a rich source of detailed information to the public and private sectors. This paper describes the most recent survey, the 1994-96 Continuing Survey of Food Intakes by Individuals (CSFII), and uses of CSFII data for policy decisions.

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To ensure the health and well-being of Americans through improved nutrition and food choices, the U.S. Department of Agriculture (USDA) has conducted nationwide food surveys since the 1930's. These surveys provide a rich source of detailed information to public and private sectors--including the Congress; USDA and other Federal agencies; state and local agencies; diverse members of the food industry; and research and educational institutions.

The 1994-96 Continuing Survey of Food Intakes by Individuals (CSFII), commonly called the *What We Eat in America* survey, is the most recent USDA food survey. The CSFII is the only nationwide survey that measures the kinds and amounts of food eaten by Americans and links attitudes and knowledge about diet and health knowledge with food and nutrient intakes through the Diet and Health Knowledge Survey (DHKS). The target population for the 1994-96 CSFII is individuals of all ages in the United States. Food intake data are collected on two nonconsecutive days, with both days of intake collected by the 24-hour dietary recall method. The survey provides data to meet precision requirements for 20 sex-age domains for the general population and 20 low-income domains. The DHKS sample consists of adults 20 years of age and over from the CSFII who provided at least one day of dietary intake data. Over the three years, dietary intakes were collected for more than 16,000 individuals. About 6,000 adults participated in the DHKS. The newly-developed CSFII Pyramid Servings Data Base provides CSFII food intake in Pyramid servings per person per day.

The USDA food surveys are used for a number of public policy applications as well as addressing a variety of research topics. Applications include monitoring the nutritional adequacy of American diets, measuring the nutritional impact of food fortification, developing dietary guidance and related programs, estimating exposure of population groups to food contaminants, evaluating the nutritional impact of food assistance programs, evaluating the nutritional impact of food labeling, and assessing the demand for agricultural projects.

Adequacy of diet is an important measure of well-being. In the 1998 Economic Report of the President to Congress, CSFII data were used to measure the adequacy and sufficiency of children's food intake. The percentage of children under age 18 in low-income households reporting that there is sometimes or often "not enough to eat" declined from 13.5 percent in 1989-91 to 9.4 percent in 1994-96. Other CSFII results show that the percentage of individuals consuming at least the recommended number of Pyramid servings increases with higher income levels. In addition, the percentage of calories from fat is lower for those with higher income levels. To determine appropriate levels of folate fortification, the Food and Drug Administration used CSFII 1989-91 data that estimated the effect on daily folate intake with fortification at different levels for grain products, dairy products, and juices. The Food Quality Protection Act of 1996 mandated USDA to provide the Environmental Protection Agency (EPA) with information on food consumption patterns of a statistically valid sample of infants and children. The data will be used to determine pesticide tolerance levels to meet the health-based safety standard for pesticide residues in all foods. To meet EPA needs, USDA is currently collecting the Children's Supplemental Survey to supplement the sample size of children in the 1994-96 CSFII.

The data from the 1994-96 CSFII and DHKS have just been released in CD-ROM format. For more information, visit our Home Page at http://www.barc.usda.gov/bhnrc/foodsurvey/home.htm.

Endnotes

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The Use of CSFII Data by Food Manufacturers To Measure Food and Nutrient Intake

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General Mills is a consumer foods company committed to providing quality, convenience and value in their products. This company, which started as a flourmill in the late 1880's, now markets such well known brands as Cheerios, Wheaties, Betty Crocker Dessert Products, Bisquick, and Gold Medal flour through-out the world.

General Mills is also committed to providing healthy food products and contributing to consumer understanding of health and nutrition. The General Mills Institute for Health and Nutrition supports marketing efforts related to nutrition and is responsible for nutrition labeling of all consumer and foodservice products. This group of nutrition professionals also researches and documents all health and nutrient content claims, conducts nutrition education programs and tracks consumer trends in health and nutrition attitudes and intakes.

As the diet-disease relationships of heart disease, cancer, obesity, osteoporosis, diabetes and others become clearer, dietary concerns of consumers have begun to shift away from a diet of avoidance to a more positive dietary approach. The data provided in the CSFII, Pyramid Serving Study and Diet and Health Knowledge Survey helps food manufacturers to understand the shifts in food and nutrient intake that result. For example, data suggest the majority of adult females recognize the importance of eating a variety of foods including plenty of fruits and vegetables however, current intake of these food groups is at or below the minimal level. Grain consumption for this population is currently 5.3 servings and less than 1 serving of whole grain. Recommendations suggest 6-11 servings of grain, several being whole grain. As a manufacturer of primarily grain products, this suggests an opportunity to help Americans increase grain and whole grain consumption to help improve the overall profile of the diet.

The CSFII is invaluable in providing both the public and the private sectors with current measures of both food and nutrient intakes for the U.S. population. This continuous monitoring is increasingly more important as the food supply continues to change a rapid pace and the U.S. population and related food patterns become more diverse.

The CSFII provides data with practical utility for food manufacturers with primary applications in developing and evaluating fortification policies (needs/risk assessment), serving size assessment, targeting food products for specific populations, developing nutrition communications (packaging and otherwise) and evaluating food use for new product opportunities. This data set is also used for the validation of private nutrient intake research conducted at General Mills.

The advent of the USDA Beltsville Human Nutrition Research Center/ Food Surveys Research Group Web Site has been of enormous value in making the CSFII data and related research more timely, accessible and affordable. General Mills applauds and supports efforts to further develop this valuable communication vehicle.

The CSFII data was also instrumental in identifying the nutrient needs of the aging population in America and the importance of a good breakfast for this population to reach optimum intakes. The Morning Meal on Wheels program is the result of an alliance between Health and Human Services' Administration on Aging and General Mills Foodservice to provide breakfast to selected homebound elders at risk of isolation and health problems, malnutrition related to nutritional intake.

Future challenges for consumer foods companies include the growing diversity of the American population that is driving the need for more customization of food products, especially related to health. Faster response required by industry to stay competitive results in the need for even faster access to relevant data needed for decision making. And the global marketplace is resulting in a growing complexity of consumer needs. The USDA should be encouraged to share their expertise in the area of food and nutrient intake collection with other countries that are struggling to define the nutrient needs of their populations.

Endnotes

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Consumer Interests Annual *Volume 44, 1998*

Information and Advertising Policy: A Study of Fat and Cholesterol Consumption 1977-90

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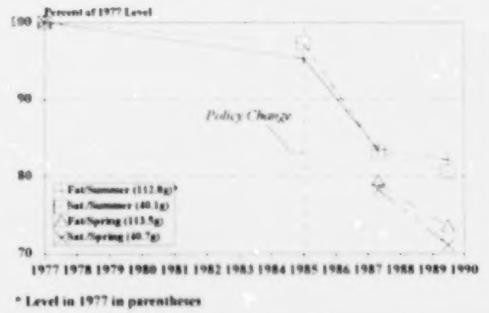
Economic theory suggest that advertising may play an important role in consumer good markets directly by providing information or indirectly by facilitating competition on advertised dimensions. False claims or claims that are sufficiently incomplete as to be deceptive can, of course, harm consumers. Designing prudent advertising policy thus requires a balancing of the potential to deter truthful claims against the likelihood that deceptive claims will go unchallenged .

One area where this tension has been keenly felt in recent years concerns health-related claims in food advertising. In our efforts to better understand these advertising policy issues and the effects of information on consumers more generally, the USDA food consumption surveys with their extensive detail on consumer food choices have been an extremely valuable resource. For example, we used weighted means for consistent samples from the surveys to investigate the likely effects of a mid-1980s relaxation of the policy towards claims that explicitly discussed the role of diet in disease risks.[2] For summer samples of men aged 19 to 50, mean fat and saturated fat consumption in grams is shown in Figure 1. These results show a decline throughout the period, but an accelerated rate of decline after the change in policy. Figure 2 illustrates the weighted mean percentage of calories from fat for each of the samples. With this measure the pattern is different, with a slowing of the rate of decline after the policy change. The difference is due to changes in calories, which increased from 1977 to 1985 before beginning to fall in the late 1980s. Using the detail in the surveys, we learned that a large portion of the increase in calories came from soft drinks and alcoholic beverages, increases consistent with industry sales data. A reduction in the percentage of calories from fat due to an increase in the consumption of empty calories is not a desirable change in diet. Thus, taken together, these data suggest that men's fat consumption improved faster in the late 1980s, when the health claims policy was relaxed, compared with the 1977-85 period. The results for women are comparable.

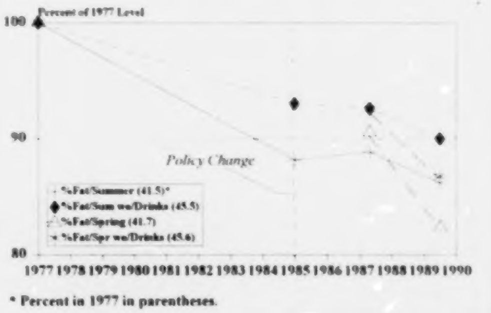
These and a variety of other results in the study are generally consistent with the hypothesis that the relaxation of the advertising and labeling policies that allowed more explicit diet-health claims added information and competitive pressure to food markets. The results also suggest that the spread of information is a complex process, with much we do not currently understand.

Figure 1. Fat and Saturated Fat Consumption, Summer, Men 19-50 Years



* Level in 1977 in parentheses

Figure 2. % of Calories from Fat Consumption, Summer, Men 19-50 Years



* Percent in 1977 in parentheses.

Endnotes

1. Associate Director for Special Projects, Bureau of Economics. The views in this article are those of the author and not of the Federal Trade Commission.
2. These results are taken from Pauline Ippolito and Alan Mathios, *Information and Advertising Policy, A Study of Fat and Cholesterol Consumption in the United States, 1977-1990*, Bureau of Economics Staff Report, FTC, September 1996. Copies are available from the author (202-326-3477 or pippolito@ftc.gov).

Using Food Consumption Data To Estimate Dietary Exposure To Chemical Contaminants In Foods

USDA's CSFII consumption data may be used to assess the health impact of chemical residues in foods. These data permit estimates of long- and short-term intakes for the overall US population and for population subgroups. Intake is calculated as the product of the amount of food consumed and the chemical level in the food. Because consumption and contaminant data frequently are collected independently and for different purposes, one must use caution when combining the data.

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Consumption data may be used to assess the potential health impact of chemical contaminants or constituents in foods. Dietary intake, calculated as the product of the amount of food consumed and the chemical level in the food, may be compared against an appropriate toxicological endpoint. Intake levels greater than a "safe level" may be associated with adverse health effects.

Novigen's proprietary software, Dietary Exposure Evaluation Model (DEEM™) utilizes consumption data from the USDA Continuing Survey of Food Intake by Individuals (CSFII). These data permit estimates of both long- and short-term intakes for the overall US population and for various population subgroups based on age, gender, ethnicity, geographical areas, and consumption during different seasons of the year.

In selecting food consumption data, completeness of food descriptions is especially important, because chemicals are usually measured on the raw agricultural commodity (RAC); however, survey data typically are reported on foods as consumed (e.g., slice of apple pie). Therefore, it is necessary to convert the food consumption data into a format that may be used in the dietary intake estimates. The use of recipes enables this conversion. For example, the apple pie reported in the CSFII would be converted to the RAC components such as wheat, field corn (sweetener), soybean (oil), apple, etc. in the appropriate recipe proportions.

Residue data are collected to establish enforcement levels and to calculate anticipated levels for use in dietary intake estimates. Data typically are generated by pesticide registrants or may be from monitoring data collected by government agencies such as FDA Total Diet Studies and Enforcement Monitoring Programs, CAL-EPA Food Safety Programs, and the USDA Pesticide Data Program.

Because consumption and contaminant data frequently are collected independently and for different purposes, one must use caution when combining the data. For example, FDA monitoring data include compliance samples that are taken as follow-up to findings of illegal residues or when there is evidence of a pesticide residue problem. Thus, data collected under the compliance program may overestimate actual exposure, since compliance data tend to include samples with a higher incidence of detectable residues.

Intake estimates may utilize 1) chemical and consumption single point estimates, 2) consumption distribution plus single point chemical value, or 3) distributions of both consumption and chemical levels. Single points of upper percentiles of consumption or of residue levels for more than one food may result in overestimates. In contrast, methods using distributions consider variations in daily consumption and, therefore, provide more realistic estimates than the single point method. Since the actual consumption distribution is used, this method may be utilized for several foods. Methods using residue distributions combined with food consumption distributions result in even more realistic estimates of intake.

Endnote

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Consumer Adviser Certification Program In Korea

A Consumer Adviser is defined and the related certification process is discussed. Career prospects for Consumer Advisers are considered.

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Insook Song, The Catholic University, Korea[3]

Consumer Advisor and Certification Process

As businesses, government, and civil organizations seek to improve consumer decision-making and satisfaction, the need for highly trained consumer professionals to identify and meet consumers' real needs and concerns becomes increasingly apparent. These groups can benefit from the consumer adviser certification program, which can provide qualified consumer professionals trained to provide a consumer's perspective.

The tasks of consumer advisers are threefold. First, they are expected to provide consumer counseling and education services. Second, consumer advisers consult with business to help maintain a consumer focus in the process of product and service development. Third, consumer advisers help resolve consumer problems and complaints. To successfully fulfill these tasks, consumer advisors need knowledge of: 1) consumers' legal rights and responsibilities, 2) consumer related laws and regulations, 3) consumer product and service characteristics, 4) product use, 5) banking and insurance, 6) consumer credit, 7) marketing and advertising, 8) retailing structure, and 9) other elements such as life style, special language and culture. In addition skills related to counseling, communication, consumer research, use of modern technologies, and problem-solving techniques are needed. It has also been noted that consumer advisers must be patient and have optimistic, generous, responsive and outgoing personalities. To be a certified consumer adviser, applicants should have graduated from a university and meet the requirements noted in Table 1.

Table 1
Consumer Advisor Certification Requirements

Required Courses	Introduction to Consumer Science, Consumer Laws and Policies, Decision Making for Consumers, Consumer Research Methods, and Consumer Counseling
Select Two Courses	Introduction to Business, Household Economics, Food and Nutrition, General Economics, Personal Finance, Consumer and Housing, Marketing, Clothing and Textiles, and Study of Consumer Goods
Internship	Candidates must complete 40 hours of internship experience in a related field.
Credentialing	The Korean Consumer Education Committee of the Korean Society of Consumer Studies examines candidates' GPA, course completion, and internship experience. Candidates meeting all standards are certified as a consumer advisor.

Prospects for Consumer Advisors

As the demand for consumer professionals increases, certified consumer advisors will find increasing opportunities for employment. While it is too early to determine the effect of the Consumer Advisor Certificate on employment opportunities, the program has resulted in the following: courses needed for certification have been instituted at several universities; interaction and reciprocal relationships between universities and consumer related organizations (e.g. the Organization of Consumer Affairs Professionals), businesses, and government agencies have been initiated, and Consumer Science is becoming an increasingly popular major among university students. In addition to student interest in the certification program, other fields are using the Consumer Advisor Certificate program as a benchmark.

Endnotes

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Consumer Science in Korea: An Overview

An overview of the development of consumer science in Korea is presented. The economic and social environment leading to consumer science is noted, as well as the academic environment from which consumer science emerged. The paper concludes with a discussion of the current situation with respect to consumer science and its future prospects.

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Introduction

After the World War II and the Korean War, Koreans struggled for economic growth to pull themselves out of poverty and the debris of war. Over three decades Korea experienced an average 8.2% annual growth rate with annual income rising from $79 in 1960 to over $10,000 in 1997 (National Statistical Office, 1996). Family income and consumption, family living standards, and related issues were the primary topics of focus until late 1980s. At this time consumer issues became an important topic due to the dramatic growth in income and consumption (Korea Consumer Protection Board, 1997)

Since 1990 the study of consumer issues has increased dramatically in Korea. (Choi, et al., 1990). Consumer laws emerged in Korea beginning 1981, with the Board of Consumer Protection founded in 1987. Even though the consumer movement started in the 1960s, there were few scholars or researchers interested in consumer issues until the late 1980s. As interest in consumer issues increased, a need for consumer related professionals and research emerged.

Historical Development of Consumer Science in Korea

Beginning in the late 1960s, many Korean universities founded colleges of home economics. Highly qualified female students applied to these colleges to enroll in programs focused on private family life. These students were not typically oriented toward careers outside of the home since such work was considered inappropriate for women.

In the early 1980s feminism, along with rapidly changing economic conditions and social values, affected the perspective of female college students. With improved economic wellbeing families needed more income to maintain their level of living, household tasks moved into the marketplace, and household products were increasingly produced outside of the home.

By the late 1980s many female high school graduates did not wish to apply to a college of home economics because they wanted to pursue a career outside of the home. To attract more students, home economics units began to change name and revise curricula. While there was controversy regarding name change, it brought the development of new programs and much needed professional training for students. Some universities have also changed home management programs to consumer science programs; however, this change is also controversial.

Current Condition of Consumer Science in Korea

In Korea there are over 160 universities and 145 junior colleges. In 1995 over 18,000 students graduated from a college or university. This included more than 4,000 home economics graduates from universities and more than 3,600 home economics graduates from junior colleges. This represents over 10% of all female college and university graduates (Kim and Lee, 1996).

Twenty-nine universities have a home economics program. Seventeen of these changed the college name to College of Life Science or the College of Life and Culture. At the same 29 universities, eight colleges have changed the home management department into a consumer-related department, in conjunction with significant program changes.

Along with these changes in the traditional field of home economics, Korean consumer protection laws now require the establishment of customer service units in businesses. Even without this legal requirement, Korean businesses are becoming more consumer-oriented. They realize the importance of customer service and the need for self-regulation. In addition to changes in the private sector, various levels of Korean government, after implementation of the local autonomy system in 1995, are seeking ways to better serve Korean consumers (Song and Lee, 1996). Although the demand for consumer professionals in increasing, there is currently no licensed consumer professional.

Financial planning for consumers is an emerging area in Korean financial institutions. In the past, financial advice and financial planning were not popular within the general public. With the rapid increase in household income, the increase in dual-income families, the increase of economic problems associated with age and the increase of the risk of job loss, many Korean consumers now find themselves in need of professional advice to realize economic security (Yoon, et al., 1997). Given these changes, Korean financial institutions need to provide increased comprehensive financial counseling services directed toward the prudent use of financial resources, rather than just sales. The Consumer Education Committee of the Korean Society of Consumer Studies developed the Consumer Adviser certification program in 1996. The Committee has also decided to develop a program to accredit financial planners.

Future Prospects

After the name change from home economics, some universities have successfully adopted and settled into the new fields. While some home management departments have changed their name to Consumer Science and have developed programs oriented toward career preparation, students becoming a Certified Consumer Advisor find this certification is not yet highly valued in the labor market. However, as customer service becomes better established within business and government, the Consumer Science major, and related certifications, will be viewed more positively in the job market. Research in consumer related areas are becoming increasingly popular. This is in part the result of a rapidly developing economy and growing consumer base. However, the current economic difficulties in Korea and the economic policy guided by the IMF have greatly lowered consumer confidence due to the anticipation of slow, or even negative, economic growth. This will make it more difficult to establish consumer science as a new field to meet social needs. But the progressive scholars and professors in consumer science are starting to teach more job-related skills and to get more involved with student career development. This will likely lead to the maturation of consumer science as an academic discipline.

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Accredited Financial Planner in Korea

Accreditation requirements for the Accredited Financial Planner (AFP) program are discussed. Limitations and prospects for the program are also noted.

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Sanghee Sohn, Taejon University, Korea[2]

With rapidly increasing household income until 1997, increasing numbers of dual-income families, increasing economic problems associated with old age, and increasing job loss resulting from the Korean economic crisis, many consumers in Korea find themselves in need of professional advice to achieve economic security. Along with this, banks, insurance companies, and securities firms often provide financial advising services to meet consumer needs. Most of these, however, only deal with a specific financial service or product, a more narrow focus than one would expect from a financial planner. In addition, most financial advisors are suspected to be slanted toward the products sold by the firm they represent. Recognizing a shortage of competent, comprehensive and independent financial advising services, and hoping to provide students in consumer-related fields of study with competence for the job in this area, The Korean Society of Consumer Studies (KSCS) decided to develop a program to accredit financial planners at its convention in 1995. After extensive planning the Accredited Financial Planner (AFP) program was launched in 1997.

An AFP is expected to provide professional advice in personal budgeting, life cycle financial planning, retirement planning, taxes, insurance, investments, estate planning, credit management, and financial independence. To become an AFP, candidates must meet the education and training requirements summarized in Table 1. The education requirement can be met through course work provided by universities or workshops provided by the KSCS.

Table 1
Accreditation Requirements for the AFP in Korea.

Education Requirement	5 required courses (or approved substitute courses): Consumer Science, Household Economics, Consumer Financial Planning, Investment and Insurance, and Research Methods 2 optional courses from the following: Financial Planning Practice, Consumer Finance, Korean Household Welfare, Family Resource Management, Life-Cycle Planning, Economics, Principles of Accounting, Consumer Law and Policy, Consumer Counseling, and Private Law
Training Requirement	Minimum of 40 hours of training in financial service institutions or a one-credit course, On-the-Job Practice

The AFP program in Korea has several limitations. The primary one is that the education and training requirements seem too weak to produce students having all the skills and knowledge valued by potential employers. Because one major reason for developing the AFP program was to promote consumer studies in Korean universities, education requirements had to fit into existing university curricula. This suggests a potential need to develop standards for a higher level financial planner license in the future.

There are currently 26 AFPs in Korea, with more AFP licensees expected in the coming years. It is important that efforts be made to help the public understand what the AFP designation means, to help AFP licensees gain the recognition they deserve, and to extend possible job markets for AFPs. The need for credible financial planners will not diminish due to the current economic crisis; rather the crisis could actually increase the need for appropriately trained financial advisors.

Endnotes

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The Consumer Movement Today: An Encyclopedic View

The casual observer may have the impression that the consumer movement in the U.S. and abroad has made little progress since the early 1980s. A closer look reveals that over the past two decades, the movement in the U.S. and abroad has progressed organizationally, has become increasingly sophisticated politically and technically, and has had considerable success in advancing the consumer agenda.

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The Continuing Influence of Esther Peterson on the U.S. Movement

Two recent events have stimulated me [Stephen Brobeck] to think about trends in the U.S. consumer movement. The first, of course, was the preparation of the Encyclopedia of the Consumer Movement (1997). The second was the death of Esther Peterson. In thinking about both, it struck me that much of what Esther tried to teach us in her acts and words is reflected in some of the movement's most important recent trends. I would suggest that five of her lessons are increasingly put into practice — by national advocates, especially.

The first lesson she taught us was that, no matter how distasteful, it is important to engage in politics. Public policy affects consumers; skillful, determined advocates can influence this policy. Political engagement is particularly important when policymakers are insensitive or even opposed to consumer interests. Usually working out a compromise is better than getting nothing at all.

Today, consumer advocates face challenges that are nearly as great as those which faced Esther during her two stints as special assistant to the president. Washington's political environment dramatically changed with the election of a conservative Republican Congress in 1994. Almost immediately, advocates were put on the defensive by determined efforts to weaken federal regulatory agencies and individual consumer remedies. Yet, the attacks had the effect of energizing advocates, which is an important reason that, to date, few of these assaults have succeeded. Congress has only limited remedies of defrauded investors, eliminated some auto leasing disclosures, and weakened regulation of pharmaceutical products. In the same period, advocates played an important role in persuading Congress to approve a substantial increase in the CPSC's budget, add new fair credit reporting protections, improve safe drinking water standards, and overhaul telecommunications regulation building in some consumer protections. At the same time, advocates were successful in helping persuade the Clinton administration and independent regulatory agencies to toughen antitrust enforcement, regulate seafood and meat safety more effectively, and approve new auto leasing protections.

A second lesson that Esther tried to teach us is that if we don't hang together, we will all hang separately. No one in the movement's history preached solidarity more forcefully or effectively than Esther. It was she who persuaded national and grassroots consumer groups to join with consumer co-ops and trade unions to form the Consumer Federation of America. It was she who linked CFA to the Nader network and even to some business groups in support of the consumer protection agency. And, it was she who in 1987, persuaded one of these business organizations to join in the Consumer Insurance Interest Group in an effort to strengthen state insurance regulation.

Largely because of Esther's example, and the emergence of a less consumer-friendly environment, advocates are cooperating with each other, with many other consumerists, and with business groups more closely than ever before. In large part because of Esther's example, consumers have begun to work for the first time with business in permanent coalitions, including the Coalition for Consumer Health and Safety, Advocates for Auto and Highway Safety and the Coalition Against Insurance Fraud.

Esther's third important lesson to us was that education and information matter a great deal. Over and over in her life as a consumerist, she emphasized the importance of the right to know. This commitment perhaps can be seen most clearly in her work as a consumer advocate for Giant Food. Not only did she convince this major food retailer to introduce open-dating and unit-pricing, but because of Giant's example, most of the supermarket industry was persuaded to follow suit.

Today, many advocates are more aware than ever of the limits of using public policy to protect consumers. In today's political environment, any new protections are likely to represent compromises. Yet, even if they were not, these protections would only establish minimum standards of business conduct, not ensure that consumers received good value in their product purchases. It is this realization that underlies the numerous consumer information and education efforts begun in the last decade.

Esther's fourth lesson to us was not to forget consumers in other countries, especially those in the Third World. As special assistant for consumer affairs, she persuaded President Carter to issue an executive order creating a list of banned and restricted products. Though this order was soon revoked by President Reagan, Esther later helped persuade the United Nations to create an international list of hazardous products. She then successfully championed U.N. approval of Consumer Protection Guidelines which helped persuade many developing nations to establish new consumer protections.

Slowly but surely, consumer groups are focusing on international issues. Consumers Union helped create, then lead, the International Organization of Consumers Unions (now Consumers International). The National Consumers League has recently taken leadership in opposing child labor overseas. And, in the past decade, U.S. groups increasingly have involved themselves in trade issues.

The fifth and final lesson that Esther helped teach us is that, even in the face of political and financial pressures, one's integrity, and that of the movement, must be maintained. Some other social movements have not been able to resist these pressures. Certainly, political and financial pressures have influenced many advocates. Without a doubt, funding influences what issues one chooses to address and what strategies are pursued. Yet, the integrity of the whole consumer movement has, in my opinion, not been seriously challenged. That is partly because of the movement's diversity. While constraints imposed by particular types of funding may limit individual groups, they do not impose similar limits on the entire consumer movement because of the variety of the movement's funding sources.

The death of Esther — partly because it occurred at about the same time the U.S. Office of Consumer Affairs was denied funding — may have led some to question whether an era of the American consumer movement had ended. It appears to me that Esther's lessons from her words and deeds have been learned by much of the current movement and will help ensure that it continues to survive and prosper.

An Overview of the International Consumer Movement

During the last five years, I [Robert Mayer], have had opportunities to learn about the state of the world consumer movement as ACCI's representative to Consumers International's 1994 and 1997 World Congresses, and as co-editor of the Encyclopedia of the Consumer Movement, with responsibility for its forty entries on the consumer movement outside the United States. In speaking about the world consumer movement, I prefer to use the word "movement" rather than "movements" because I believe that consumer activists around the world, while not tightly coordinated, actively communicate with each other, assist each other, and view themselves a part of a single but diverse movement.

A second general characteristic of the world movement is its growing professionalization. By this I mean that consumer advocacy is increasingly like other professions which provide full-time paid careers. One measure of this professionalization is the continuity of leadership in most of the world's major consumer organizations. Another is the training that occurs in fund raising, negotiation and lobbying, strategic planning, and general management. One element that is missing is a clearly defined program of academic preparation for a career as a consumer advocate. A third general observation is the growing internal democracy within the world movement. While the organizations of the more developed countries continue to wield the power that comes with greater financial resources, organizations from less affluent countries are exerting greater and greater influence within CI and the world consumer movement.

In a recent article (Mayer, 1998), I placed the countries of the world into six categories depending on how their wealth, government involvement in the economy, strength of democratic institutions, and cultural values influenced the nature and extent of consumer protection. Here, I will use a simpler classification of more developed countries, newly market-oriented countries, and less-developed nations as a basis for discussion.

Among the more developed nations, the U.S. remains enviable for the strength of its product-testing magazine, and its independent, nonprofit consumer organizations. We in the U.S. may not regard this as a time of growth in the consumer movement, but the movement is certainly holding its own. In contrast, the movements in many European countries are suffering because of cutbacks in the government support on which they have relied.

The Encyclopedia articles on Denmark, the Netherlands, and Sweden document this process of retrenchment. Other organizations which are financially independent have been criticized for the strategies they have employed. These include the British Consumer Association's co-branded credit card, and the Belgian Consumer Association's move into other countries with joint-publishing ventures. At the same time, European economic integration has helped raise the level of consumer advocacy in Spain, Portugal, and Greece.

The consumer movement in the newly market-oriented countries is described in a superb Encyclopedia article by Alastair Macgeorge (1997) on the consumer movement in Central and Eastern Europe. There are, in addition, a number of articles on individual countries. Two quite distinct trends appear to be at work in these nations as they make the transition to free-market economies, and to democratic political systems. One trend is bottom-up and involves the emergence of individual consumer leaders. These leaders, who typically have professional or academic backgrounds, have virtually jump started the consumer movements of their respective countries. It is unclear whether their organizations will survive a change in leadership and achieving this continuity is a challenge.

More immediately, the fledgling organizations in these countries face the problem of obtaining funds and gaining public support. In many countries in Central and Eastern Europe, the tradition of participating in private organizations is weak. Moreover, consumers are not fully aware of the benefits of consumer information, so the idea of paying for it seems strange. Macgeorge views these characteristics as part of the "old 'dependency culture' in which the individual was powerless, and it's always somebody else's job to put wrongs right." A second process is top-down and involves government effort to gain acceptance into the European Union. Most countries in Central and Eastern Europe have introduced general consumer protection laws. Some also are seeking to regulate activities that were unimportant in a planned economy, especially advertising and financial services. Most of the changes occurring in the countries are favorable to the development of a consumer movement. But one important element frequently is still missing: "a self-aware middle class with money to spend on consumer goods" (Macgeorge, 1997).

The consumer movement is growing rapidly in the less-developed nations. This growth can be measured by the timing of membership in CI. In the 1970s, membership grew rapidly in Southeast Asia, with the opening of CI's first regional office in Penang, Malaysia in 1975. In the 1980s growth was rapid in Latin America, with the opening of an office in Santiago, Chile in 1986. In the 1990s the highest rate of growth has come in Africa. CI's newest regional office was set up in Harare, Zimbabwe in 1994. Given the diversity of these nations, it's not easy to draw generalizations about their consumer movements, but I will offer some. First, in these countries, the definition of consumer rights is broader than that in more developed nations. It includes access to basic necessities, and to a clean environment, especially clean water. Unlike U.S.-style consumer rights which emphasize means of increasing consumer welfare (e.g., provision of information), the emphasis in less-developed countries is on consumption itself.

A second characteristic of movements in the LDCs is the close connection to other social movements and to the democratization process. In these countries, the consumer movement, the environmental movement, and the women's movement are far more interconnected, with leaders moving among these movements. A third characteristic is the preponderance of women in leadership roles and as rank-and-file participants. This is bound to affect the goals, methods, and impact of the movement. Women are more likely than men to be familiar with the nature and extent of consumer problems, and to have the time and social networks to organize for action. On the other hand, the identification of consumer issues with women's issues may relegate them to a lower position on the political agendas of male-dominated countries. A final characteristic is the financial precariousness and dependence of the organizations in these countries. To date, countries like Australia, the Netherlands, Canada, the United Kingdom, and the United States have provided financial assistance either directly or through CI. Fortunately, a small grant goes a long way, but government support will likely be necessary if organizations are to survive without subsidies from developed nations.

The world consumer movement appears to be healthy. While the movement is in a steady state in the U.S. and perhaps in slight decline in Europe, it is growing rapidly elsewhere. And, it also appears up to the challenge of dealing with increasingly complex issues of telecommunications, international trade, and the natural environment.

A New Look at the U.S. Movement

Some changes in the structure and strategies of the U.S. consumer movement have become increasingly clear in the last two decades. For this discussion, I [Robert Herrmann] will draw on the article which Rob Mayer and I prepared for the Encyclopedia (Herrmann and Mayer, 1997). Many of these same changes have occurred in the movements in other countries, as has been pointed out above.

Perhaps the most significant change is the institutionalization of the movement. Its legitimacy is established, and it no longer has to fight to be heard in policy discussions. Its organizations are permanent and ongoing, and have built relatively secure funding sources. Another indicator of its status is its self-reflexiveness, of which the Encyclopedia is only the most recent example. A closely related change is the trend toward specialization, especially in the newer organizations. The early organizations tended to have a broad, general focus, the newer ones have tended to focus on particular issues such as nutrition and food safety, auto safety, or health issues. With this specialization has come the possibility of developing expertise on complex, technical issues. But, specialization also has created a need for coalitions with others in order to get remedial action. Another closely linked change is the trend toward professionalization. The organizations of the movement increasingly are staffed with paid careerists, rather than eager but perhaps less expert unpaid volunteers. With professionalization has come the recognition that many consumer protection proposals involve costs and well as benefits, and that the costs of any new protection must be weighed. Greater professionalization also has brought more experience and skill in lobbying for political action. It also has brought essential new entrepreneurial skill in gaining public attention and financial support.

With these changes in organizational structure have come some changes in strategy. Buycotts and boycotts continue to be mechanisms for pressing for change. As action at the national level as become more difficult, there has been notable action at the state level through the use of the initiative and referendum process, and suits by state attorneys general. We also have seen a succession of sophisticated legal actions by the regional offices of CU, and by others. There also has been increasing recognition of the lifelong importance of consumer education and information. The continuing stream of complex new products and services makes continuing learning essential.

The U.S. movement also has become far more global in its perspectives than it was two decades ago. Trade issues, and the welfare of consumers in other countries have become concerns of U.S. movement organizations. When CU took the lead in the founding of what has become CI, they seem to have been motivated by the potential advantages of sharing test protocols and results. What has evolved is an international organization which emphasizes sharing experiences and resources for promoting advocacy, and consumer protection.

Certain tensions and problems remain unresolved within the consumer movement. One of these problem areas is relations with the labor movement, and with the environmental movement. What does the consumer movement owe labor for its past support? And, does the consumer movement do enough to promote environmentally responsible consumption? Another ongoing problem is the coordination of movement activities. The movement is made up of a diverse set of organizations with varying philosophies; how can they be brought together to promote action on critical issues? Another ongoing problem is mobilizing the public support, financial resources, and technical expertise to deal with the complex issues confronting consumers today.

Overall, these changes and those described above suggest a new level of permanency, stability, and sophistication in the consumer movement both here in the U.S. and abroad.

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Endnotes

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Consumer Interests Annual *Volume 44, 1998*

The Prevalence of Businesses Owned and Operated by Families

The purpose of this paper is to delineate the operational definitions used to study households with a family firm and provide preliminary findings on the prevalence from the national study entitled, "Family Businesses: Interactions of Work and Family Spheres."

Elizabeth Scannell, University of Vermont[1]
Ramona K. Z. Heck, Cornell University[2]

Operational Definitions

Even if family businesses sustain our economy and society, their universality often goes unnoticed (Cox, 1997). The prevalence of family owned and managed businesses in the US is important for three reasons. First, estimates claim that family firms make up from 90-98% of US businesses (Shanker, & Astrachan, 1996), yet precise numbers are not available. Secondly, these same studies assert that family businesses employ over 50% of the labor force possibly influencing almost 50 million American households (U.S. Bureau of Census, 1997). Thirdly, the enormous economic contribution these businesses add to the gross domestic product (GDP) can not be overlooked.

Uniformly definitions of what makes up a family firm have focused on the owner and manager. This study defined a family broadly to include households with more than one member related to each other by blood, marriage, or adoption, and partners living together. To evaluate the interaction of the family with the business, active management and business ownership were required. The two intensity measures, years in business and hours per year, were included to allow for the differentiation of family businesses. To qualify as a family business, the owner-manager had to have been in business for at least a year, had to have worked at least 6 hours per week year round for a minimum of 312 hours a year in the business, had to be involved in its day-to-day management, and had to reside with another family member.

Sampling Frame and Results

Households made up the sampling frame so that agricultural, minority and home-based businesses would be represented. In addition, the household is the logical place to examine the relationships between the family and the business. The results reported here came from the screen questionnaire used to identify business owners and managers. A national probability sample of 14,115 listed telephone numbers was drawn based on pilot test prevalence of 12.8% (Heck & Scannell, 1997). About 15% were ineligible yielding a response rate of 82%. Although 18.2% of households had someone who owned or managed a business, only 10% of the households were eligible for the study. These percents suggest that SBA figures may underestimate the number of businesses in our economy especially micro and home-based businesses. Nearly 2 million households owned 2 or more businesses.

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A Viable Model of Sustainable Family Businesses

Sustainable family businesses require both functional families and profitable businesses. The purpose of this paper is to develop a model allowing for variable degrees of overlap of the family and business rather than assuming they constitute either a single system or two separate systems.

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Karen Duncan, The University of Manitoba[2]
Virginia Zuiker, The University of Minnesota[3]
Alma J. Owen, Purdue University[4]

Modeling Issues

While the interaction of families and businesses is acknowledged in the literature, the dominant perspective has been that family influences harm a business. The universally proposed recommendation for successful coexistence of the two systems is separation (Ibrahim & Ellis, 1994) or clear boundary definition (Rosenblatt, de Mik, Anderson & Johnson, 1990). It is the premise of this paper that sustainable family owned businesses require both minimally functional families and successful businesses.

The dominant paradigm used to examine the interaction of business owning families and businesses has been that of overlapping systems. From our perspective it is not acceptable to sacrifice the family for the good of the business. Neither is it always good for the business to separate it from the family. The important theoretical constructs within the overlapping systems are different from previous models. This model is interdisciplinary. It is the result of synthesizing research from several fields. The family system component is more like a traditional family resource management model than a family studies model. The business component is more like an entrepreneurship model than a business management or marketing model.

Functionality is not a clear construct in the family therapy literature. None of the "theories" of family functionality proposes predictors or correlates of functionality. This study relied on family resource management theories to identify correlates of functionality (Winter, 1996). In those "theories" satisfaction is determined by adaptation, resource management practices, the family manager's human capital, family goal setting, environmental changes, and family structure.

Success is an ambiguous term commonly used by both lay and professional people to describe the achievements of a firm or person. There are two broad constructs used to define and measure business success. One is financial success and the other is survival. Predictors of success can be categorized into four groups: owner characteristics, business characteristics, community characteristics, and owner management practices.

Overlap of the family and business is accounted for explicitly through both explanatory variables and statistical methods of analyzing the systems.

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Studying Family Businesses

The purpose of this paper is to describe the research design and methods used in the research project, "Family Businesses: Interaction in Work and Family Spheres." The sample, interview schedules, and field procedures are described; and problems in data gathering are discussed.

Margaret A. Fitzgerald, North Dakota State University[1]
Mary Winter, Iowa State University[2]

The Sample and Respondents

Because the primary focus of the research is the interaction between the family and the business, the sampling frame consists of households rather than businesses, with a screening instrument used to identify family households in which at least one member is a family business owner. The sampling frame consisted of all households with a listed telephone number, hence this process yielded a nationally representative sample. The desire to generalize the findings of the study to the US population, rather than just to the 16 participating states, dictated the need for a national sample. Even though budget constraints limited the size of the sample; a goal was set to interview 20 households in each of the 50 states, with data weighted proportionally in all analysis.

Interviews were conducted with both the business manager and the household manager. In about one-third of the households, the business manager and the household manager were the same person. A longer, combined interview schedule was administered to an individual who performed both roles.

The Interview Schedules

Included in the interview schedule administered to the business manager were details about the business: type of ownership; number and type of employees; the role of each household member in the business; business management practices; financial details of the business; retirement and succession planning; satisfaction with the business; and the intrusion of the family into the operations of the business. Included in the household manager's interview schedule were details about management and functioning of the household; the intrusion of the business into family life; and family satisfaction. Both managers were asked identical questions about family goals and tensions about the family business. The family financial manager was asked total family income, income from the business, market value of a dwelling, and the use of personal income to finance the business. The person responding to the interview schedule administered first gave complete demographic information about each household member. Including those questions in the first interview, regardless of the respondent, assured obtaining demographic data.

Problems in Data Collection & Implications for Data Analysis

Screening began in the summer of 1997 by trained interviewers hired and supervised by the Iowa State University Statistical Laboratory staff members. A lower than expected response rate to the screen is attributed largely to the explosion of telemarketing; and the prevalence of answering machines and caller id, often used to screen calls. Interviewing both the business manager and the household manager from each household also contributed to the low response rate. Interviewing a national sample also affected the response rate adversely because, for many respondents, there was no local tie to legitimize the project. Finally, it was more difficult to get the business managers to agree to do the interviews, given their time constraints. Therefore, there are more than twice as many household manager interviews without a business manager match than vice versa. Clearly, with 1,301 completed interviews, the sample size is sufficient to support complex analyses, but it is imperative that no analyses are conducted without weighting the sample to assure representativeness. The differential response rate between business and household managers requires further exploration.

Endnote

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Gathering and Imputing Data about the Family and Business

This paper discusses the rationale and challenges of collecting financial data from the household and the business and the imputation strategies employed for missing data in a national study entitled, "Family Businesses: Interactions of Work and Family Sphere."

George W. Haynes, Montana State University[1]
Sharon Danes, University of Minnesota[2]

Gathering Data

Small business are typically family-owned and operated businesses, where family and business resources are often intermingled. Research on small businesses generally disregards the intermingling of resources and attempts to assess the impact of changes on the business only. This data collection effort bridged this substantial gap by designing a survey instrument that carefully assesses the management, marketing and financing structure of both the family and business entities.

The business financial information was more challenging to gather than the household financial information. Household and business managers living on a farm/ranch had difficulty separating the financial resources between the farm/ranch business and household entities. Some business managers were reluctant to reveal the size (gross sales) or profitability of the firm. Other respondents were not familiar with accounting terminology. In several cases, the contributions to the household reported by the household and business managers differed substantially. While this data set presents a substantial imputation challenge for financial related questions, these types of data collection problems are not unique to this data set.

Missing Data Assessment and Imputation Strategy

Sample size, degree and characteristics of the missing data and randomness of that missing data are considerations when deciding questions about the handling of variables with missing information. The performance of any missing-data method depends on the mechanisms that lead to missing values (Little & Rubin, 1987; Paulin & Ferraro, 1994) Three types of mechanisms are possible: missing completely at random (MCAR), missing at random (MAR), or nonignorable nonresponse. Each of these response mechanisms has implications for the strategy to be used for addressing missing-data problems.

The first level of imputation will utilize the standard accounting identities. A second level of imputation will employ methods proposed by Little and Rubin (1987). Stochastic regression will be used in cases where most of the financial data is reported. In other instances, where most of the financial data is missing a cold deck method will be employed using the Survey of Consumer Finances for household financial data and National Survey of Small Business Finances for business financial data. Given the problems in separating business and household finances, separate populations weights are necessary for the farm/ranch businesses and households so the analyst has the choice of either including or excluding these observations. This carefully imputed survey will enable the co-mingling of household and business resources to be described and analyzed.

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Consumers and the Changing Health Care Environment: Policy Issues for Consumer Education and Research

The health care system in the United States is changing. This session addressed issues deserving attention of consumer educators and researchers. Consumer researchers and those addressing policy issues for families and rural health providers explored these issues.

Mary Ellen Rider, University of Nebraska-Lincoln[1]

Panelists:
Lisa Swirsky, Families USA Foundation[2]
Darin Johnson, National Rural Health Association[3]
Carol Makela, Consumer Advisory Committee, Foundation for Accountability[4]
Mary Gardiner, Jones, Consumer Interest Research Institute[5]

National health care reform did not occur, but health care is evolving as managed care, state policies, and employer and health care provider resource efficiencies are being implemented. In this evolution, the role of the consumer is changing. The question is 'are consumers being prepared to understand and act upon the rights and responsibilities they have and experience in the health care market?' Such change presents new issues for consumer academicians and professionals to address.

Among the issues that require our attention are:

1) variety and saturation of managed care arrangements (Is it enough to educate consumers about health maintenance organizations (HMOs) and preferred provider organizations (PPOs)?),
2) changes in Medicare that will alter the consumer's situation (Capitated rates of reimbursement for Medicare are going into effect. Rural-urban differences in the reimbursement rates are being changed. What are the implications for consumers of health care?),
3) development of outcome data measures (report cards)-consumers use of information for health care choices (Norm-based measures of health care outcomes and consumer satisfaction with providers and delivered services are being developed. Are consumer researchers and educators involved?), and
4) increased use of telemedicine (Telemedicine is changing the availability of information for both patients and medical providers. What are the implications for consumers of health care?).

Therefore, the purpose of this session explored changes occurring in the health care market and suggested implications for consumer health policy research and education.

Lisa Swirsky

The Balanced Budget Act of 1997 (BBA) introduced Medicare+ Choice, exposing beneficiaries to new products and risks. Among the products seniors will encounter include HMOs, PPOs, Provider Service Organizations (PSOs), private fee-for-service insurance contracts, and medical savings accounts (MSAs) through the MSA Demonstration Project.

Currently, 16% of Medicare users are enrolled in HMOs. As recently as summer 1997, 12% were enrolled in HMOs. This varies by geographic area. The benefit of an HMO to the beneficiary is the freedom from supplemental insurance policies and reduction of prescription drug expenses.

PSOs feature capitated rates of reimbursement, must comply with Medicare quality standards, and are exempt state solvency laws.

Private insurance contracts range from fixed payments to fee-for-service arrangements. The BBA indicates that the package offered in these plans must be the same or better than Parts A and B of Medicare. Premiums are not capped as are deductibles and copayments.

MSAs offer high deductible, catastrophic health insurance to beneficiaries. The maximum allowable deductible is $6000. Medicare contributions pay the premiums for such arrangements. The remaining amount paid to Medicare goes toward the MSA which will pay up to the amount of the deductible. The demonstration project enrollment has been capped at 390,000 beneficiaries. One concern is whether consumers know that they might have to pay costs incurred which exceed the amount of the deductible.

The BBA of 1997 requires that meaningful grievance processes are put into place. In the case of emergencies, cases must be expedited. The BBA also prohibits gag rules on care of beneficiaries.

The BBA changes the nature of social insurance laying the groundwork for (1) defined contributions and (2) a tiered health care system. Questions of concern include the future of the Medicare program and security of beneficiary health in the new arrangements. Families USA will monitor and report its findings on its web site (http://www.familiesusa.org/).

Darin Johnson

The Balanced Budget Act of 1997 (BBA) introduced important changes in the capitated payment to providers serving Medicare beneficiaries. The BBA established a payment floor that differs by county in the United States. Over the next six years, the payment will become a blended payment, blending in a national average, accounting for 50% of the rate in 2004.

Only 1% of persons enrolled in HMOs in 1997 were rural residents. This low enrollment is due to the very low capitation payments available in HMOs, PPOs, and PSOs in rural areas. Likewise, the US government will contribute to MSA accounts on a monthly basis using the capitation formula. This will result in Medicare MSA participants in high payment areas receiving much larger deposits in their MSA accounts versus those living in low payment areas. The expectation is that consumers will gradually contribute more, thereby reducing the government's obligation.

In rural areas, provider service organizations (PSOs) are forming. Medicare allows PSOs to provide services through networks of providers. In Nebraska and Wyoming, the goal is to create statewide PSOs to serve rural beneficiaries. PSOs differ from HMOs in that providers own the organization. Two nationally-based health care organizations are exploring the possibility of creating a national PSO model or, separately, providing administrative services for PSOs.

On March 6, 1998, the negotiated rule-making committee created by the Balanced Budget Act of 1997 and charged with developing federal solvency standards for provider sponsored organizations (PSOs) came to consensus on a set of federal standards. After intense negotiations between provider and insurer groups, the committee was able to develop a set of standards that are intended to allow PSOs to from in states that have very high net worth and liquidity requirements.

The new standards only apply to PSOs who find their state standards to be prohibitive to entering the Medicare market or those whose application to the state is not acted upon within 90 days. Such a PSO can apply for a federal waiver and meet solvency standards. PSOs that receive a federal waiver are only eligible to enroll Medicare beneficiaries.

Highlights to the agreement include:

Minimum Net Worth. $1.5 million ($750,000 in cash or cash equivalents) would be required to start a PSO, dropping to $1 million after it begins operations. The PSO must also have sufficient cash flow to meet its obligations as they become due.

Healthcare Delivery Assets. Allows 100 percent of book value of tangible health care delivery assets including hospitals, medical facilities, their ancillary equipment, and property required for the PSOs principal office. HCFA will allow 20 percent of all intangible assets such as the value of a physician network or a rural health clinic practice to be counted toward the minimum net worth under certain net worth stipulations.

Funding Projected Losses. The PSO must demonstrate meeting the projected losses for the entire period to break even. The guarantor must provide the PSO with cash or cash equivalents to fund the projected losses for a six month period through the first year. After the first year, the project losses can be covered by parental guarantees, letters of credit, lines of credit from regulated financial institutions, legally binding agreements for capital contributions or legally binding contracts of a similar level of reliability.

Rural PSOs. In the spring of 1998, HCFA will seek public comment on the need for downward adjustments in the net worth and liquidity requirements for rural PSOs. NRHA proposed the process noting that the new standards were actually raising the level of net worth and liquidity in many rural states.

Reimbursement for telehealth services is addressed for the first time in the BBA. But, Medicare will reimburse providers only for interactive uses where diagnosis is involved in full county health professional shortage areas. HCFA will not pay for "store and forward" information, such as sending X-rays to another site for evaluation or use. This latter format has been the main use of telemedicine in the first few years of its inception. Congress's intent may differ from HCFAs position.

The vision for the BBA reform provides a model for rural communities. Frequently, however, rural communities lack the knowledge or capital to set up rural health care models. An economic development approach is needed that assist a community in addressing its future needs and wants with regard to health care. Concerns exist for the migration of urban facilities to rural areas and whether these formats are a long term solution to providing service in rural areas. Systems will need to change to what rural residents want and receive in the future.

Carole Makela

Quality measures may focus on process, structure, and outcomes. Outcome measures address both unit costs and health quality or health results. It is the latter area in which consumers need to focus. Quality measures are intended for use by providers, purchasers, and consumers. Questions for these groups include:

What and whose quality is being measured?

What is the best practice relative to the bottom line of the health care?

Problems exist in developing standards for quality include:

- lack of agreement on criteria
- complexity of measuring, sampling, weighting
- costs of collecting data with regard to resource costs and privacy or confidentiality of data
- consumer input
- consumer awareness of quality (requires input form consumers)
- consumer needs with regard to information, understandability, and decisions making. (What decisions will consumers make? When do consumers need to make the decisions? What can they understand?)

For the development of good quality measures, consumers need to participate. The view cannot be that it is just another market survey process. Timing also becomes important if consumers who are ill may have no interest or energy to respond.

The Foundation for Accountability (FACCT) is working to encourage a health care system where consumers understand the importance of health care; make decisions based on clear, reliable quality information; provide direction to the health care system about what is important; and balance personal and societal goals in making of health care decisions. FACCT has developed a Consumer Information Framework to organize comparative information as it is developed.

The process FACCT is using to develop quality measurements for specific conditions includes:

- Foundation work
    - background paper
    - consumer focus groups input
    - consultation
- Development
    - measurement concepts identified
    - field trials
    - review by Measures Council
    - revisions
- Implementation and refinement
    - endorsement by FACCT Board
    - focus groups to:
        - (1) verify measures for consumers and
        - (2) recommend consumer information options.

Currently endorsed measures exist for adult asthma, breast cancer, diabetes, health risks, health status, and major depressive disorders. (The diabetes quality improvement project can be accessed and responded to on the web at http://www.facct.org/DQUIP.html). Measures that are under development address coronary artery disease (outpatient care), pediatrics, end of life, alcohol and drug dependency, and HIV/AIDS (care and culture competency issues).

Mary Gardiner Jones

Health care has shifted its focus from acute interventions in hospitals to management in the home or in neighborhood clinics, assisted living facilities, and nursing homes. Therefore, consumers' needs for information have changed and expanded substantially.

Patients are being discharged sicker and sooner or are relegated to procedures of outpatient clinics. As individual life expectancy increases, consumers are subject to increases in chronic health conditions which they are expected to manage at home. Therefore, the patients' care has evolved beyond the traditional nurse or physician. Patients increasingly are the ones who have to assume responsibility to make sure that the various members of their home care team know what each other have recommended. In addition, patients increasingly are being told they must take responsibility for their own wellness and health prevention and promotion.

Telemedicine or telehealth, the more appropriate term, makes it possible for patients and health care professionals to be in touch electronically with each other without having to see each other face to face. It has allowed physicians to connect to their patients, find resources, and receive training. This is especially important in understaffed areas. Telemedicine as team care makes communication between home and professional care providers more important.

Telemedicine provides:

- new ways to access and get information
- visual communication which assists visual learners
- links for reminders such as in patient scheduling

The policy issues relative to increased use of telemedicine include services gaps that exist for those not owning telephones (20% of the US population with incomes below $10,000 do not have phone service); lack of advanced networks for less affluent, less densely populated areas; and special discounts (beyond rural hospitals since rural nursing homes and home health care agencies are left out of the BBA provisions) to providers as incentives for technology. The latter issue is particularly important as provisions have been made in the BBA for rural but not for inner city residents. As the use of telemedicine continues, access barriers will indicate where changes in policy need to occur.

Policy needs include:

- making sure technology is accessible,
- insuring "have nots" are NOT left out,
- guarding against moving self care from responsibility to accountability, and
- identifying consumer barriers especially for particular demographic groups.

To stimulate regulatory and private sector initiatives, two actions need to occur. (1) Grass roots advocacy efforts to ensure equitable access must be widespread. (2) A strong research base to support needs for equitable access including how consumers of various demographic characteristics seek and use health care information; how learning is facilitated through audio and visual communication in contrast to textual communications; to what extent does information result in behavioral change based on audio, visual or textual communication; and to what extent do various population groups have access to and familiarity with use of electronically generated health care information. In addition, community needs must be identified so that a comprehensive view of using the planned services will demonstrate market potential to the coming networks.

Session participants raised questions with regard to:

- quality and access of quality health care when restricted to providers in one network;
- emergency medical services; and
- the ability for a network to survive when healthy Medicare beneficiaries opt out of networks with regard to the governments long term ability to support the capitated rate.

Endnotes

1. Assistant Professor and Extension Specialist, Consumer Health Policy
2. Health Policy Analyst
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4. Professor, Colorado State University
5. Formerly with the Federal Communications Commission, 1992 Colston Warne Lecturer

Consumer Interests Annual *Volume 44, 1998*

Target Markets for Technology Fraud: Who Is Vulnerable?

With the nature of the Internet making it difficult to spot fraud, consumers need to develop a buyer awareness and keep themselves informed on the latest risks of scams and ripoffs with the growing use of computer technology. The panel discusses protections being implemented as well as available resources that consumers may refer to for assistance.

Joan L. Kinney, University of Wisconsin - Madison[1]
Karen P. Goebel, University of Wisconsin - Madison[2]

Katharine Kopp, Senior Policy Analyst at the Center for Media Education (CME), describes the online environment for children with regard to privacy and the collection of personal information. With 14 percent (9.8 million) of all youth online in 1998 and an estimated 42.4 million expected by 2002, the Internet has become the playground for children. Companies in this electronic marketplace view children as prime targets who are avid consumers of electronic media and products and services. So children who influenced the spending of 500 billion dollars in 1997, constitute three markets for business: they buy things with their own money; they are the future market as future consumers; and children's influence has an impact on parents' buying behavior.

CME's research submitted to the 1997 Federal Trade Commission's (FTC) privacy workshop reported 90 percent of the sites analyzed actively collect personal identity information from children with 40 percent of those sites providing incentives such as free merchandise, screen savers and sweepstakes. Often, spokescharacters are used to give the message that you can trust your animated friends. Yet 86 percent of the surveyed sites are collecting personal identity information without obtaining parental consent, and only one site asks children to check with their parents before releasing information. J.D. Power and Associates' poll in April 1997 reported that 80 percent of the net parents said it was not acceptable to ask children their real names and addresses even if that information is only used within the company. That percentage increased to 90 percent when such information is shared or sold to other companies. And 96 percent of the parents said that companies collecting information from children should be made legally liable for violations of their stated policy. Family PC's survey in December 1997 found that 67 percent of the parents were concerned about marketing to children on the Internet. When asked what they found most troubling about the Internet, 88 percent of the parents said it was the use of personal information.

The CME has proposed guidelines for collection limitation; parental consent; disclosure; purpose specification; access, correction and prevention rights; and implementation/enforcement. Children have a right to anonymity and autonomy. If information is collected, parents need to give consent. Sites need to disclose, not only at the home page but wherever information is collected: what information is collected, who is collecting it, who has access to the information, how does the information get collected, how does a parent have means of redress, and how can they get information from the company. Information collected for one purpose should not be used for another purpose. Parents should be able to find out from a company whether information was already collected, to verify the information is correct and, if not, to correct it, and also to prevent future use of that information. These guidelines must be enforceable and punishable.

Policymakers need to be educated. The Federal Trade Commission, following their major analysis of privacy practices, will introduce their recommendations to Congress in June. The Commerce Department will be reporting on self-regulation and privacy to the President in July. CME's intent is to supply further evidence for supporting children's need for special protection.

Phillip McKee, Internet Fraud Watch Coordinator, reports on the National Consumers League's efforts to cover scams in cyberspace. With the creation of www.fraud.org in 1996, consumers from around the world could report and receive tips about fraud. The top ten subjects of reports to Internet Fraud Watch in 1997 include: web auctions (items bid for but never delivered/value of items inflated); Internet services (charges for services not provided or supposedly free); general merchandise (sales of everything never delivered or not as advertised); computer equipment/software (no delivery or misrepresented); pyramids (profits made from recruiting others not sales of goods/services); business opportunities/franchises (empty promises of big profits via pre-packaged opportunities); work-at-home plans (materials and equipment sold with false promise of payment for piece work performed at home); credit card issuing (false promises of credit cards to people with bad credit histories on payment of up-front fees); prizes/sweepstakes (requests for up-front fees to claim winnings that were never awarded); and book sales (genealogies, self-help improvement books and other publications that were never delivered or misrepresented). There were also plenty of bogus investments, empty travel and vacation offers, fake scholarship search services and illegal advance fee loans.

While many of the scams found online are simply revised versions of the typical telemarketing or mail frauds, the Internet itself creates a whole new set of problems. Anyone can put up a great looking web site making it difficult for the average consumer to determine the site's legitimacy. Consumers buy sight unseen, recourse is not always easy, and consumer protection laws often do not apply. The nature of the Internet makes direct contact of consumers cheaper than ever via mass emailing or posting of messages to different newsgroups allowing crooks to forge headers to mask as well as mislead their real identities and locations.

Creating clear legal ground rules for Internet commerce and the enforcement of those rules are crucial, but public education must be a major component of any effort to curb Internet fraud. Consumers need to know how to check out the offers they see and the companies that make them.

Businesses also need to be educated as to their basic responsibilities. The National Consumers League has taken a leading role on their website in educating the public about Internet fraud by providing a wealth of information on safe cybershopping and tips on how to avoid many different types of common scams as well as warning consumers about new trends, common scams and recent government enforcement actions. Plus consumers can use the web site's links to go directly to other useful resources, such as the Federal Trade Commission or the BBBOnLine program.

Steve Saulter, Project Director for BBBOnLine, reflects on the Better Business Bureau's task of trying to help consumers sort out the good from the bad by helping people to identify the legitimate businesses that are operating online. The BBBOnLine (www.bbbonline.org) --- in operation for less than a year and having signed over 1,000 companies --- has been set up to help businesses self-regulate the Internet and to establish a company's legitimacy.

The BBB's concern for security, privacy and legitimacy in the online environment requires that business participants be members of the BBB, have been in business for at least a year, have passed a visitation to the company's physical site, and have clean and honest advertising. Once online, the participating business' webpage allows consumers to visit the BBB server to find specific information about the company. Even though the BBB seal can be copied, clicking back to the BBB linkage will warn a consumer whether that company has conformed to the BBBOnLine standards. In addition, a webcrawling device monitors the Internet looking for any use of the BBB name. Any questionable findings are turned over to the BBB's legal department.

Every participant has a site visit — the BBB goes to the physical location of every single one of the businesses to check them out. Potential participants are asked for their résumé, client list, references, samples of their work and whatever else is needed to establish their credibility. The BBB then knows where they are and that they can provide what they have promised.

Monitoring advertising claims is a big part of the BBB operations. A thorough review is done on each company's websites. Probably about 15 percent of the applications reviewed need to clarify their advertising. BBB works with the companies to either substantiate claims that they make about their speed of service or the viability of their offerings, and if the company cannot substantiate it, then the ads are not accepted. And if questioned ad is not changed then the company is turned down as a participant.

The BBB has the participating companies sign a participant agreement to resolve disputes informally or if that fails to go to arbitration. This offers consumers who have had non-delivery, or wrong delivery of products a clear path to easily settle those disputes with BBBOnLine participants.

BBB hopes to have over 3,000 participants on BBBOnLine by the end of 1998. Presently the website has a search engine that can search keywords and company name and can cross reference by state. BBB's other website www.bbb.org (the main Better Business Bureau site) gives information on current scams and how to locate the local BBB. Future plans include a related project called the National Information System which will have all BBB reports on companies posted on line for people to see.

Check the BBB website for results of a survey that has been recently commissioned. Findings show that security is a primary issue but reliability is also a big one. When asked "If a company that you didn't know but were considering doing business with online had been checked out by a third party, would you be more confident doing business with that company?" 84 percent of the respondents said yes.

Paul Leuhr, Chair of the Federal Trade Commission's Internet Coordinating Committee, reports that the FTC, having brought over thirty actions against Internet fraud and deception, has been one of the most active Federal agencies in Internet commerce. The FTC is recognized as the general consumer protection agency in the U.S. although it has no jurisdiction over common carriers (telephones, railroads),insurance companies, non-profit agencies (but do go after the fraudulent telemarketers), and banks.

Most of the cases one hears about are labeled as " new wine in old bottles." However, a couple of new types of fraud are referred to as " fraud in the brave new world." An example is the FTC vs. Audiotex case which solicited people to look at adult photos. The people would download a special viewer. Then during the download process their modem speakers would be shut off, their ISP connection severed, and then their modem would silently dial an international phone number in Moldova at a rate of two to three dollars per minute. The phone connection would not be disconnected until the computer was completely turned off. Eventually a timer was added to only keep one connected for an hour ($180). It was implied that one had free access to the browser and pictures. Yet the people who fell for this scam were not the most gullible consumers but rather those that did have some Internet savvy. The bottom line: 38,000 people were taken in and 2.74 million dollars will go back to consumers primarily in the form of telephone credits on their long distance telephone bills.

To conclude with some of the traditional frauds: here are some warning signs. Watch for the generational forgetting such as the pyramid schemes where income comes from recruiting not selling. Avoid the exaggerated claims which lack truthful and substantiated proof. Be aware of credit repair offers that can actually be illegal.

In addition to handling cases, the FTC is heavy engaged in prevention education directed at consumers and businesses. Concern is focused towards privacy and information in the four categories of notice, consent, access, and security. The website www.ftc.gov keeps consumers updated. A recent privacy surf looked at 1200 different websites to investigate whether businesses are posting something about their privacy policy, whether they make notice that they have a privacy policy, and whether they give you information about what the company is doing with this information. If this is lacking, the FTC puts the industry on notice saying "Hey, you'd better get your self-regulatory act together." The FTC has also joined the fraud artists with mimics of real scams with the attempt not to trick the consumer but to find consumers and give them information at what may be called a very teachable moment. FTC would like to see more consumer involvement in notification of problems. Go to ftc.gov to Consumer Line. For concerns about spam send the message to uce@ftc.gov (unsolicited commercial email).

Continue to keep private information private. Be cautious of companies that claim to have overseas connections, ones that don't allow email replies, or have no phone or street address. Think of P.O. boxes as red flags. Question out-of-this-world claims. Use secured connections when using credit transactions and know who it is going to and their reliability. Consider filters for children. Watch out for X-Files which can do nasty things to your hard drive.

Remember that the Internet is a great source of information. Know where you can go for assistance.

Endnotes

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The Hidden Costs of Informal Caregiving: An International Comparison

The purpose of this panel session was to present empirical evidence from three countries--the U.S., Canada and Germany—about economic consequences of taking on informal elder care responsibilities and to consider implications of this evidence for public policy and practice. Time costs, employment-related opportunity costs, and out-of-pocket costs related to caregiving were examined.

Janet E. Fast, University of Alberta[1]
Gong-Soog Hong, Purdue University[2]
Jane Kolodinsky, University of Vermont[3]

Overview

In recent years demographic, socio-economic and policy trends have contrived to make elder care an issue of utmost policy importance. While the need for elder care increases, governments' willingness and ability to meet this growing demand diminishes. As a result, policy makers increasingly have been turning to community based care as a substitute for institutional care. Community care is believed to be both "better" and "cheaper" than institutional care because it relies much more heavily on informal, unpaid caregiving provided by family and friends of those in need.

The belief that informal care is cheaper is based largely on results of cost-benefit analyses claiming to show that the cost of community care is lower than the cost of institutional care. However, most of these studies examine only the impact of community care on public expenditures, ignoring costs incurred by informal caregivers. The economic success of the shift to community care clearly depends on the transfer of responsibility from paid health care workers to unpaid family members and friends, and on the assumption that informal care is free.

The assumption that informal care is free has been challenged for some time, but only recently has empirical evidence about the costs associated with informal care begun to emerge. In this session, data, policy and practice discussions drawn from Canada, the United States and Germany illustrate the global nature of the issue.

The cost of informal elder care in Canada: Implications of recent policy reform

Janet E. Fast

Introduction

In spite of the growing debate regarding the relative costs of formal and informal caregiving, few, if any, systematic attempts have been made to estimate the cost of informal care. The major costs experienced by informal caregivers can be categorized as direct labour costs, employment-related opportunity costs, out-of-pocket costs and psycho-social costs. The purpose of this paper is to present evidence of the incidence and extent of two of these costs, the cost of direct, unpaid labour and employment impacts, for Canadian elder care providers.

Methods

Data consisted of two sub-sets of Statistics Canada's 1996 General Social Survey (GSS), the core content of which was social support. The first comprised respondents who had provided elder care[4] at any time during the previous year. The second included only employed elder care providers. Replacement cost of the unpaid caregiving labour was calculated using stylized estimates of time spent helping seniors with elder care tasks, and average hourly earnings of people in occupations that most closely matched the caregiving tasks, calculated from 1991 census data, adjusted for inflation to 1996 dollars. Employment impacts were measured using a series of questions about whether the respondent had: changed or left a job; declined a job transfer or promotion; declined a job offer; changed hours of work; missed one or more days of paid work; arrived late to or left early from work; had job performance affected. Analyses were largely descriptive. Numbers and proportions of respondents reporting participating in various elder care activities, mean time spent performing those activities, mean value of elder care time, and numbers and proportions of employed respondents reporting various employment consequences arising from their caregiving activities were calculated.

Results and Discussion

Almost 9% of respondents had participated in one or more elder care tasks during the year prior to the survey. At a population level, this represents just under two million Canadian caregivers. The most common tasks were shopping/transportation (60%) and meal preparation/cleanup and housekeeping (40%). There were more women than men elder care providers. A larger proportion of women than men helped with meal preparation/cleanup and housekeeping (51% and 26% respectively) and personal care (36% and 19%) while a larger proportion of men than women helped with maintenance/repair (44% and 18%).

The results clearly refute the notion that informal caregiving is costless. Elder care providers spent an average of 5.3 hours per week doing elder care, most of which was devoted to meal preparation/cleanup and housekeeping, and personal care. Men spent less time (4.8 hours/week) than women (6.6 hours/week) cooking and cleaning for seniors. Both male and female non-employed caregivers spent more time providing elder care than their employed counterparts. This is especially true of personal care tasks.

The average weekly replacement cost of informal caregiving ranged from $54.54 to $59.82 per caregiver. This represents what it would have cost, on average, to hire elder care services from the labour market. At a population level the value of caregivers' labour can be estimated at between $107 and $117 million per week.

Elder care responsibilities also take a toll on caregivers' employment. Over half of all respondents (higher proportions of women than men) had made adjusted their employment as a direct result of their caregiving responsibilities. Most took time off at the beginning or end of the day, take whole days off, or officially change their hours of work. These strategies are likely to have, at a minimum, short term effects on earnings of these caregivers. Of particular import, though, are the few who report changing or leaving a job, declining transfers or promotions, and turning down job offers. The impact of such decisions are more far-reaching, both in terms of the magnitude of even the short term economic impact, and in terms of the long term effects on earnings, benefits, and pension entitlements.

The Economic Value of Informal Care-Giving for Disabled Parents in the U.S.

Gong-Soog Hong

Background and Objectives

This study has two major objectives: (1) to estimate the total economic value of informal care-giving for disabled parents in the United States, including the value of money and time that are given; and (2) to identify factors which influence the decision of adult children to give time and money to their disabled parents, using the 1992 Health and Retirement Study (HRS). The HRS sampled individuals born between 1931 and 1941 and their spouses/partners. The HRS sample is ideal for this study because, compared to other age groups, more people in this age group are thought to provide assistance to their disabled parents. The HRS sample also provides a wealth of information about physical health and functional status, family structure, intergenerational transfers, disability, and financial status. The sample for the study consists of 4,635 adult children who have at least one living parent with either activities of daily living limitations (ADLs) or cognitive impairment.

Analytical Process

The typical care-giver in this study was 55-years old, and high school educated. Almost 75% were married; 69% were employed. Average household income was $52,700. On average, the respondent and their spouse spent 19.7 hours per week caring for the respondent's own parents, and an additional 24.3 hours caring for their parents-in-law. Weekly caregiving hours were much higher for those who cared for parents with ADLs (24.4 hours) than for those whose parents were cognitively impaired (11.6 hours). Respondents also gave financial support to parents and parents-in-law. The difference in money transfers between the amount that adult children give to disabled parents and the amount they give to disabled parents-in-law per week is very small on average: $41 per year for the respondent's own parents and $42 for the respondent's parents-in-law.

The estimated dollar value of the time given to disabled parents was imputed for those not employed in the labor market. The wage model was based on human capital theory and was estimated separately by gender. The estimated hourly wage averaged $12.15 and ranged from $3.87 to $24.27. Annual dollar values of the time given to the respondent's parents and parents-in-law were computed separately: $11,157 and $16,090, respectively. For those who cared for both their own parents and their parents-in-law, the number is much higher, $32,461. The total value of time and money given to the respondent's own parents was $13,294, for parents-in-law $18,276. Among those who are taking care of both parents and parents-in-law, the value of time and money given was $39,377. As expected, the total dollar value is higher for those who are caring for parents with ADLs ($16,568) than for those who are caring for parents with cognitive impairment ($8,911).

Findings and Conclusions

Multivariate logit models were estimated to identify factors that contribute to adult children giving time and money to disabled parents. Characteristics of parents are found to be important in explaining the giving behaviour of their adult children. As the number of parents with ADLs increases, the likelihood of giving both time and money increases. This increased level of giving reflects parents' need for support. Compared to adult children whose parents are *not* poor, adult children with poor parents tend to spend more time to care for their parents, and they are less likely to provide financial support to their disabled parents. This finding may suggest a positive correlation between parents' and children's financial status: adult children who have poor parents also may have lower levels of financial resources to share with parents.

Siblings' giving behavior is an important predictor of giving behavior of adult children. Compared to adult children whose siblings have *not* transferred time to their disabled parents, adult children with siblings who *have* transferred time to parents also are more likely to spend time caring for disabled parents. Similarly, siblings' giving money to parents also positively influences the money giving behavior of adult children. Compared to adult children whose siblings have not transferred money, adult children whose siblings have transferred money to disabled parents also are more likely to transfer money. These findings suggest that parents with more children would receive more support than those with fewer children or no children.

The age and education levels of adult children also are related positively to both the amount of money and the amount of time given to their disabled parents. The employed are more likely to give money than the unemployed. Married adult children are less likely to give money to their disabled parents than those who are single. Those who participate in volunteer work tend to provide more support for their parents with their time and money than those who do not, which reflects their altruistic behavior.

A Comparataive Analysis of the Costs of Informal Caregiving: The U. S. and Germany

Jane Kolodinsky and Anne Zooyab

Introduction

In Germany, about 12 million individuals were over age 65 in 1996 and the number is expected to increase by over 60% during the next 40 years. Along with the U.S., Germany experiences one of the longest life expectancies (73 for men; 79 for women), and is burdened by one of the highest health care GDPs (9%). In addition, the country has been faced with increases in female labor supply over the past twenty years. Consequently, Germany faces a burden with respect to the long term care of their elder population.

Methods

Using the standard Heckman reservation wage model to estimate the reservation wage rate for women not employed in the labor market, we employ data from the 1995 wave of the German Socio-economic Panel Study (GSOEP). The twist is that we test to see whether co-residing with an elder (and including the elder's characteristics) results in a significantly different model in terms of labor supply. Then, reservation wages are calculated for both co-residing and non-co-residing households. This approach not only allows us to calculate a cost of time for informal care giving, it also serves as a starting point to answer the question, "do elders provide household production or 'use up' household production?"

The general procedure is as follows. First, we estimate a Probit model of participation and obtain the selectivity-correction term (λ^*). Using observations who are working, we then estimate a market wage equation and a work-hours equation, including λ^* as an explanatory variable in an OLS regression model.

Our sample includes adult women aged between 16 and 55. There are a total of 3774 observations; 2500 are working and 1274 are not working. 3.2 percent (121) have experienced of co-residence. For those who have never co-resided with an elder parent, the average number of work hours per week and hourly wage are 34.2 and 17.85 D.M. For co-residers, the average is 31.7 hours of work and 19.36 D.M. per hour.

Results and Discussion

Our results indicate that accounting for co-residence and elder characteristics do make a difference when estimating a labor supply equation (<.01). Increases in the length of co-residence decrease the probability of labor supply, and the effect is mediated by having a female elder in the household; female elders may provide some childcare; and health status of elder is insignificant in the labor supply equation.

For the hours of work equation, presence of all ages of children (with the exception of 13-16) decreases hours of work; presence of elder increases hours of work and this is mediated by health of elder--poorer the health, fewer the hours of labor supply; presence of female elders, even in poor health, increases hours of labor supply; and presence of male elders, with poor health, decreases hours of labor supply.

For the wage equation, wage increases at a decreasing rate with age; increases in schooling increase wage; and type of job (blue collar) decreases wage. These results are consistent with the general labor supply literature.

Given the estimates of hours of work and wage equations are robust, we are confident about derived coefficients for reservation wage. We use several different identifier variables to test sensitivity of results and found that the results are sensitive, but do adhere to theory. The calculated reservation wage rates are lower for employed women than women not employed in the market. Calculated reservation wages are higher in households where co-residence occurs, but not much higher. The value of the reservation wage, using a continuous variable (labor force tenure) to identify the equation is 32.27DM ($21.51U.S.) for employed women who have co-resided and 39.14 DM ($26.10U.S.) for unemployed women who have co-resided with an elder. Using other variables for identification (only dummy variables were available), reservation wage estimates ranged from 4.73DM to 97.90DM for non-employed co-residers ($3.15- $65.27U.S.).

As one of the first steps in estimating reservation wage rates in households where elders co-reside with adult children, there are a few caveats to our findings. First, it is wishful thinking to put a guaranteed price on time at home! The Heckman method should be validated by using other methods on the same data. For example, there have been proposed semi-parametric techniques that improve on Heckman's assumption of normality of error term distribution.

Endnotes

1. Associate Professor, Department of Human Ecology
2. Associate Professor, Department of Consumer Sciences and Retailing
3. Associate Professor, Applied Economics
4. Eldercare is defined as doing one or more of a specified set of activities of daily living, including meal preparation and cleanup, house cleaning, laundry, sewing, home maintenance and outside work, shopping, transportation, banking and bill paying and personal care, for someone over the age of 65, because that person suffered from a long term health or physical limitation.

Consumer Interests Annual *Volume 44, 1998*

Consumer Input in Establishing a Framework of Consumer Protection to Enhance Fair Trading and Equity in the Global Market Place

Andrea Lazzarini, Brazilian Institute for Consumer Protection[1]
Bernard Sihanya, University of Nairobi, Kenya[2]
Cem Kaner, Santa Clara, CA[3]
Sothi Rachaagan, University of Malaya, Malaysia[4]

The panelists were invited to offer a discrete or a comparative assessment of consumer participation in lawmaking in other regions of the world and to question other panelists. The point of departure for their discussion was an article published in the Spring 1997 issue of Advancing the Consumer Interest, written by professor Norman Silber of Hofstra Law School which criticized the underdeveloped character formal representation and participation by consumer affairs professionals in public and private lawmaking processes in the United States. It urged consumer affairs professionals to "do more to increase respect for their expertise and formalize their role in law drafting committees."

Dean Rachagan outlined the strong formal role of consumer affairs specialists in Malaysia -- very different from the role of professionals in the United States-- but cautioned that actualization of the formal assignments was problematic, and that enforcement of existing protective rules and laws represented a major challenge. He also explained, with illustrations, several examples of ways in which international standards and trade negotiations in which consumer participation did not include participants from his region undercut or neglected consumer welfare in Malaysia. Andre Lazzarini presented a discussion of the political and sociological contrast between the development of consumer protection courts and legal representation in Brazil and the United States.

Professor Sihanya presented an examination of African developments which focused on difficulties attached to realizing and implementing the Model Law for Consumer Protection in Africa, a law in whose drafting he played a leading role. Cem Kaner illustrated difficulties in participating on behalf of consumers in private lawmaking bodies by discussing Article 2B of the Uniform Commercial Code, concerned with the licensing of intellectual property and computer software.

All the panelists debated three core issues that face those who would provide effective consumer participation throughout the world: the problem of establishing a reputation for general and specialized competence and for providing accurate assessments without access to skills and resources that may be chiefly accessible to industry and commercial interests; of demonstrating that "consumer participants" in fact participated on behalf of constituents; and of promoting views that can be identified as consonant with the "consumer interest."

Endnotes

1. Legal counsel to IDEC, the Brazilian Institute for Consumer Protection (Instituto Brasilero de Defensa do Consumador)
2. Professor of law at the University of Nairobi, Kenya;
3. Attorney from the United States who focuses on the law of software quality
4. Dean of the Faculty of Law at the University of Malaya, Malaysia

Financial Education for Youth

This session provided an overview of financial education programs aimed at adolescents. Dara Duguay, Executive Director of the Jump$tart Coalition for Personal Financial Literacy, presented information on the Coalition's role in promoting financial education. Irene Leech, VA Tech Cooperative Extension, presented information on the High School Financial Planning Program. Information about LifeSmarts was given by Annette Duff and Dolores Langford Bridgett, DC Cooperative Extension.

Pamela N. Olson, University of New Mexico[1]
Elizabeth Dolan, University of New Hampshire[2]

Introduction

Over the past decade, it has become increasingly apparent that a large number of consumers are unable to manage their personal finances. This is evidenced by the increase in consumer debt and the rising personal bankruptcy rates. In 1968, the President's Committee on Consumer Interest defined consumer education as

> the preparation of the individual in the skills, concepts, and understandings required for everyday living to achieve within the framework of his (sic) own values, maximum utilization of and satisfaction from his (sic) resources (Schoenfeld, 1973).

This is a broad definition. Consumer education is not a science, a discipline, nor a list of principles that once learned will insure the wisdom of consumer choice from then on. It is a continuing process of learning that must begin with preschool and lasts a lifetime. Today educators are fronted with the problem of designing and implementing comprehensive financial education programs to equip tomorrow's adults for an increasingly complex financial marketplace. The purpose of this session was to present some of the successful solutions currently being used in classrooms and community centers across the nation.

Dara Duguay, Executive Director of Jump$tart Coalition, gave the Top Ten Reasons Why Kids Today Need to be **Money Smart** (a la David Letterman).

10. So you can start concentrating on saving for your retirement instead of continually bailing your kids out and maybe one day you can actually borrow money from them.
9. So they don't think Social Security is having a date every Friday night.
8. So they put Grandma's birthday gift of $100 toward a long-term goal, rather than another pair of brand name sneakers.
7. So they understand Uncle Sam gets part of their paycheck before they do.
6. So they don't ruin their credit report before they even know what one is and you end up having to co-sign on all their loans.
5. So they're as familiar with the meaning of APR as they are with MTV.
4. So they realize the insurance payment on that sports car they've been dreaming about could be more than the actual car payment and you don't end up having to be their chauffeur after their car has been repossessed.
3. So **they** pay back their student loans instead of their **parents** having to.
2. So their parents aren't surprised by the $10,000 in credit card debt their child charged their Freshman year in college.
1. So they don't end up returning to the nest.

The Jump$tart Coalition for Personal Financial Literacy seeks to improve the personal financial literacy of young adults. A non-partisan partnership of diverse organizations has come together for a monumental purpose - to launch a national effort to enhance the personal financial literacy of youth. Jump$tart's purpose is to evaluate the financial literacy of young adults; develop, disseminate, and encourage the use of guidelines for grades K-12; and promote the teaching of personal finance. The Jump$tart Coalition believes that all young adults need to have the financial literacy to make informed financial decisions. This unprecedented group has a specific goal: by the year 2007 every student will be financially competent by the time he or she graduates from high school.

The Jump$tart Coalition has developed guidelines on income, money management, saving and investing, and spending so that school systems and other youth-serving organizations can integrate resources into their curricula for educating students in this area of critical need. For more information Jump$tart Coalition for Personal Financial Literacy may be contacted at www.jumpstartcoalition.org or 919 Eighteenth Street, N.W., 3rd Floor, Washington, D.C. 20006, or (202) 466-8604.

Specific Programs

High School Financial Planning Program

Irene Leech, Extension Specialist, Virginia Tech, presented the High School Financial Planning Program sponsored by the National Endowment for Financial Education and the Cooperative Extension System. The High School Financial Planning Program is a six-unit course that acquaints students with basic financial planning concepts and illustrates how these concepts apply to everyday life. The purpose of the program is threefold: to teach students about the financial planning process-what it is and what it can do for them; to give students the opportunity to apply the process through stimulating exercises provided in the program; and to teach the effective use of all financial resources. Through the course work, students can gain the necessary skills to help them establish financial goals and work towards achieving them.

The program addresses topics such as the time value of money, earning an income, protecting assets, budgeting, and saving money-all in the context of a teen's scope of experience. The six basic units of the course include:

- Understanding the Financial Planning Process
- How Income Affects Your Goals
- Managing income and Credit
- Owning and Protecting Your Assets
- Saving to Achieve Your Financial Goals
- Taking Control with Your Own Financial Plan

The High School Financial Planning Program is designed for easy classroom integration and can be taught effectively in a variety of established classes that include personal finance or money management. The program can be presented in as few as 10 classroom hours or over a longer period of time-whatever best suits the sechdule and needs of the students. This program as reached 2,562 groups and 151,121 youths last year with positive results.

For more information you may contact High School Financial Planning Program, National Endowment for Financial Education, 4695 South Monaco Street, Denver, Co 80237-9811 or your local or state Extension Service.

LifeSmarts

Annette Duff, Manager, Consumer Affairs Law and Public Policy of MCI, and Dolores Langford Bridgett, DC LifeSmarts Coordinator, presented the program, LifeSmarts. LifeSmarts, nationally sponsored by The National Coalition for Consumer Education and MCI, is the ultimate consumer challenge. LifeSmarts is a game-show format which tests the marketplace skills and knowledge of high school students in an entertaining way, and rewards them with knowledge. The program is designed to complement the curriculum that is already in place in high schools and can be used as an activity for groups, clubs, and organizations for teens in grades 9 through 12 and is accessible to students with disabilities.

The LifeSmarts competition covers consumer knowledge on the subjects listed below. Team members would need to prepare for questions on all of theses topics.

- Personal Finance
- Health and Safety
- Environment
- Technology
- Consumer Rights and Responsibilities

LifeSmarts is available in many states and has expanded each year to now include 37 states with the involvement of many state attorneys general. For more information and specifics about the competition in your state contact the state coordinator for your state listed at www.lifesmarts.org or write NCCE, 295 Main Street; Suite 200, Madison, NJ 07940.

Conclusions

In 1996, teens spent $103 billion and influenced others to spend billions more. The average teen in the United States spends $3,500 each year. Twenty-five percent of 18 and 19 years olds have their own credit cards. They also are becoming targets of frauds and scams. Understanding how to make decisions, use resources wisely, and exercise rights and responsibilities in the marketplace is important to economic survival and growth. Financial education empowers teens to take responsibility for themselves.

In 1962 President Kennedy outlined the four basic consumer rights. Theses are (1) the right to information, (2) the right to choose, (3) the tight to complain, and (4) the rights to safety. In 1975, President Ford added a fifth consumer right to the list of President Kennedy's. The fifth right is "the right to consumer education"(Langrehr and Mason, 1975). Twenty years later we are still waiting.

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Endnote

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2. Associate Professor, Family Studies

Study-Tour Courses Teach Consumer Issues & Policy

In consumer classes at our universities, faculty discuss consumer issues and policies; however, many students do not realize that they may actually be employed in a position that requires them to collect facts, pose solutions, and other tasks that help shape policies with respect to consumer issues. One way to make issues and policy "come alive" is through a study-tour experience.

Julia Marlowe, The University of Georgia[1]
Teresa Mauldin, The University of Georgia[2]
Charles Hatcher, The University of Georgia[3]
Anne Sweaney, The University of Georgia[4]
Carol Meeks, Iowa State University[5]
Martin Coppack, Syracuse University[6]

In a study-tour or internship situation, students have the opportunity to meet professionals from government agencies, businesses, and the non-profit sector. These experiences help students realize that they too may be one of these professionals some day. Various programs presented as a panel at the 1998 ACCI conference are outlined in this paper. At the University of Georgia (UGA) two courses are conducted on-site in Washington, D.C. One course focuses on housing policy and is titled *Housing Policy in Action at the Federal Level.* The other course is *Consumer Policy in Action.* In addition, the University of Georgia offers a London Study Abroad Program. This program includes several courses which are offered on-site in London. The London program also allows students the opportunity to intern in London. Syracuse University has been supportive in helping students participate in internship abroad programs. In an effort to internationalize the curriculum and offer a study-abroad program at minimal costs, the University of Georgia has developed a course, *The Global Marketplace: Mexico.*

Study Tour in D.C., *Housing Policy in Action at the Federal Level*

Housing Policy in Action is a course offered by the Department of Housing and Consumer Economics, College of Family and Consumer Sciences at the University of Georgia. Each year the course improves due to the contacts made and the experience gained. This course's strength is attributed in part to the many years of experience and contacts made by Meeks and Sweaney. It is important to point out that this is the type of course which does not just happen but is based on collaborations fostered over the years. The pre-preparation can not be overlooked for the success of the course. Issues need to be identified prior to the course and visits to the agencies and organizations related to these issues are then arranged. Agencies and organizations are very cooperative and seem to enjoy sharing their knowledge with the students. Also, critical to the success of the course is the preparation of the students. Each student is briefed on the requirements of the course and taken on an electronic field trip to introduce them to the agencies and organizations they will meet first hand when on-site in Washington D.C. The pre-preparation for the on-site tour is essential. Each student is required to acquire knowledge about the course content they will experience before they travel to the actual sites to be visited. With proper planning by the faculty members, an on-site class can be a magnificent, culminating learning experience for students. On-site visits allow for partnerships to develop between the sites visited and the university.

Sites visited during the *Housing Policy in Action* class have been the Federal Reserve Board, Fannie Mae, American Association of Retired Persons, Housing and Urban Development, USDA Rural Economic and Community Development, Freddie Mac, Manufactured Housing Institute, Housing Assistance Council, The World Bank, Federal Housing Finance Board and the National Research Council of the National Home Builders. A day is spent at the Capitol with individual appointments arranged with the Congressmen from the students' districts. Photo sessions are arranged with the Congressman representing Athens, home to The University of Georgia, and at least one Senator from Georgia.

If Congress is in session the students have an opportunity to see their lawmakers in action. A special treat has been a luncheon held in the Members Dining Room in the Capitol.

Some of the obvious benefits to organizing an on-site housing class include meeting professionals in the field, clarifying pro-and con-positions on some issues, and recognizing that effecting change in the real world takes time. Moreover, the essence of an on-site class is to add a much needed realism to the knowledge and information gained during a student's college years. Faculty who accept the challenge to offer an on-site class often find that it is so valuable an addition to their curriculum that such an on-site program is offered on a regular basis. Students often find employment ideas and opportunities they would not have been aware of without the course.

Study Tour in D.C., *Consumer Policy in Action*

Consumer Policy in Action is the Department of Housing and Consumer Economics (UGA) study tour course planned for summer 1998. This field experience offers undergraduates and graduate students the unique experience of both utilizing the theories of consumer protection and regulation they have been exposed to academically, and also an important professional and cultural experience as they learn about the kinds of opportunities available to them in our nation's capital. The course has three major parts. The first week students spend on campus gathering background information on the various organizations they will visit, such as The Federal Trade Commission, the Federal Reserve, the Consumer Product Safety Commission, the Department of Justice, and the House Subcommittee on Telecommunications, Trade and Consumer Protection. During this preliminary week, local officials at several of these organizations' regional offices in Atlanta are invited to campus as a resource to assist in the information-gathering process. The second week is spent in Washington visiting the various organizations. Carefully chosen representatives, many of whom have ties to Consumer Economics/Resource Management programs, take a few hours to talk to the students about the organization's mission, current agenda, and directions for the future. Students also have an opportunity to ask questions about professional preparation and job opportunities. The third week is for evaluation; the instructors evaluate the students using both a take-home test and a short summary of their experience. Students "evaluate" using a series of survey instruments, which gauge attitudes regarding the instructors, the organizations, the speakers and Washington itself.

University of Georgia London Study Abroad Program

In 1992, the College of Family and Consumer Sciences at the University of Georgia in partnership with the American Institute for Foreign Study (AIFS) took five students to London for a study abroad experience. Since that time, three additional groups of students have spent six weeks in London taking courses and working.

AIFS works with faculty members from the College to design a special summer program for our students. AIFS provides the logistical support services such as housing, transportation, and advanced planning, as well as classroom space in either Kensington or Bloomsbury Richmond College campuses. Students are housed in flats in Kensington or out from the city if the student decides to participate in a homestay.

In addition, AIFS provides teaching support for a required course in British Life and Culture. Faculty members from the College of Family and Consumer Sciences teach a course or courses in their area of expertise, utilizing the resources of London to provide out-of-classroom experiences. In our Global Consumer Issues course in 1997, students visited British Telecomm at the time they were attempting to buy MCI. What an interesting discussion came out of that visit. In addition, students visited the Quality and Customer Service Offices of Marks and Spencers and the Office of Fair Trade. London offers numerous opportunities for field trips and more contacts have been made for future summers.

Students also participate in a 6-week work experience. AIFS makes the contacts for work experiences based on student resumes and cover letters. Students have worked at the American Chamber of Commerce, Co-operative Bank, as well as interior design firms, fashion design firms, publishing houses, charitable organizations, auction houses, hospitals. This is the area where students feel that they benefit the most from the program. Faculty members perceive the work experiences to be the area where we need to continually work to strengthen the program.

Students indicate that they learn greater tolerance for differences in people, and develop an appreciation for the "world" and want to keep up with what is happening in the world beyond Georgia. But most of all they indicate that the work experience provides them with an opportunity to grow.

Syracuse University Internships Abroad Program

With the help of Syracuse University, students have been placed in internships abroad. Through appropriate placements in organizations, valuable experience can be gained for students in the consumer studies field. Such experiences are often referred to as beneficial in terms of providing students with insight to the real world of industry and other employing bodies. Less prominence is perhaps given to the invaluable role such work-based experiences can play in facilitating the learning of policies and issues of interest to consumer affairs professionals.

By appropriate placement a student can be exposed to a variety of consumer issues and policies. Some examples include industrial procedures for monitoring and reacting to consumer led policy development, issues related to the balancing of marketing objectives and consumer interests, and internal consumer related policy development within organizations. By participation in international internship programs, students can learn first-hand about issues which are of importance in different cultures, and learn how consumers and providers react to different policies depending on the various markets. In addition to the differences among countries, students can witness the similarities in consumer issues around the world. Such international experience can be seen as extremely relevant now and in the future due to globalization of markets and the role multi-national companies presently play in providing goods and services across contents.

Finally, such experiences can assist students who want to effect change in the interests of the consumer. Through knowledge of the consumer/provider interface, future practitioners are better equipped for collaborative ventures of benefit for all involved.

Study Tour in Mexico, *The Global Marketplace:*[*] *Mexico*

The Global Marketplace: Mexico is the Department of Housing and Consumer Economics (UGA) study tour course planned for summer 1999. The course will be taught in Xalapa, Veracruz in Mexico. The course will provide students with opportunities to learn more about the North American Free Trade Agreement (NAFTA) and relevant consumer issues and policy, as well as learn about different family systems. Communication with others who speak a different language provides students with challenges and opportunities. Such experience helps prepare students for jobs where possessing cultural sensitivity is important. Students will have classroom instruction at the University of Georgia before going to Mexico and again upon returning. While in Mexico, students will attend classes, participate in field trips and individual learning activities. The study tour course in Mexico is designed so as to minimize costs, thereby enabling financially disadvantaged students to participate. Students will be housed and fed by local families. Not only will this decrease costs, but students will have opportunities to learn more about the local culture by having this family connection.

Endnotes

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5. Professor and Dean, College of Family and Consumer Sciences
6. M.S. Candidate, Department of Environmental Arts, Consumer Studies and Retailing

Consumer Expenditure Survey Showcase: Give Me Your Retired, Your Hungry, Your Poor....

Organizers:
Jessie X. Fan, University of Utah
Geoffrey D. Paulin, Bureau of Labor Statistics

Moderator:
Geoffrey D. Paulin

Discussants:
Michael Walden, North Carolina State University
W. Keith Bryant, Cornell University

The Bureau of Labor Statistics Consumer Expenditure Surveys contain the most detailed information on family expenditures collected by the U.S. government. In addition, these surveys collect data on demographic characteristics for families as a whole (such as family size and region of residence), and for members of the family individually (such as age and ethnicity), as well as other socioeconomic characteristics, including income, assets, and liabilities. The data collected provide an extremely rich source of information for analysis in any number of applications of interest to consumer researchers.

There are two different expenditure surveys conducted under the program. One is a survey in which respondents are interviewed once every three months in an effort to ascertain how much their families spent on various goods and services during that time. These interviews are conducted for five consecutive quarters, although only results of the second through fifth are made available for research. (The first is used strictly for bounding purposes.) In this way, data for a full year are available for families that participate in all interviews. The other survey is one in which a diary is placed with a household, in which the respondent is asked to record all expenditures made during the week. At the end of that week, the first diary is retrieved and a second is left in its place with similar instructions to the respondent. At the end of the second week, the second diary is retrieved and the survey process ends. Each survey contains a large number of observations. The most recent Interview surveys contain information from about 6,000 families each quarter. The Diary surveys collect data from over 5,000 families annually. The samples for each survey are drawn independently, so no family participates in both surveys simultaneously.

To demonstrate a few of the uses of these data, this showcase included papers from experienced users of these resources. In order to expose the breadth of the data collected, the organizers chose papers using data from both the Interview and Diary surveys. The first paper (presenter: Deanna Sharpe) compared both income and spending patterns of the poor and nonpoor, addressing issues important in the debate about how poverty is best measured. Similar to the first paper, the second paper (presenter: Sherman Hanna) explored expenditures and incomes of low-income families. However, its purpose was to assess regressivity of different taxes. The third paper (presenter. Geoffrey Paulin) explored ethnic variation in food expenditures. The paper examined what associations exist between food and various ethnic groups, and whether or not these associations are valid; it further examined whether there are broader implications to be drawn from the data—for example, do some groups in general eat more healthfully than others? The final paper (presenter: Brian Riordon) addressed issues related to the life-cycle hypothesis. Specifically, how well prepared for retirement are today's 55 to 64 year olds compared to those of a generation ago? The first, second, and fourth papers used data from the Interview survey; the third used data from the Diary survey.

Prior to the first presentation, the moderator presented a brief description of the surveys in general, terms frequently used in the surveys, data publications, and similar issues. Perhaps the most exciting news for researchers was the announcement that the sample size for each survey will increase substantially in 1999.

It is hoped that the showcase inspired both new and experienced users to engage in new research using these important data. The abstract for each paper follows in the order in which the papers were presented.

Characteristics and Spending Patterns of the Poor and Nonpoor

Deanna L. Sharpe, University of Missouri[1]
Mohamed Abdel-Ghany, University of Alabama[2]

The current U.S. poverty measure compares a set of thresholds adjusted for family composition to family before-tax annual income. Use of this measure presents a practical problem: consumer income can be more volatile than expenditures and consumers can be unable or unwilling to provide a complete and accurate report of income (Paulin and Ferraro, 1994; Rogers and Gray, 1994).

Total expenditure has been used in conjunction with income in studies of poverty (Lino 1996). However inclusion of the purchase price of large durables in total expenditures can also be problematic. Rogers and Gray (1994) propose use of an alternative total outlays measure.

This study uses the 1994 Consumer Expenditure Survey to examine the characteristics and spending behavior of families classified as poor using three increasingly restrictive measures of poverty: the current income based measure (classifies 15% of sample as poor); a measure based on total expenditures applied in conjunction with the current income based measure (classifies 7.4% of sample as poor); a measure based on total outlays applied in conjunction with the previous tow measures (classifies 7.2 of sample as poor).

Findings indicate that, compared to the nonpoor, the poor by any measure were younger, had more children under age 18, fewer vehicles and wage earners were more likely to have a high school education, be Black, be single, and rent or reside in government housing. Using the most restrictive measure of poverty, significant spending differences between the poor and nonpoor were found for food at home, housing, health, transportation, an other expenses.

Comparing both income and expenditure levels with the official poverty thresholds offsets the limitations of using income or expenditures alone to identify the poor and minimize the risk of misclassifying those who underreport income or who choose to spend little. The resulting poverty measure is quite restrictive. If researchers or policy makers wish to identify those families in greatest need, this restrictive approach to identifying the poor may be helpful.

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Endnotes

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Average Versus Worst Case Projections of Retirement Portfolios

Chandrika Jayathirtha. The Ohio State University[1]
Sherman Hanna, The Ohio State University[2]

In public policy discussions related to taxes and other issues, the issue of regressivity is important. For instance, in a discussion of the New York City sales tax on clothing, Mayor Giuliani referred to the regressivity of the sales tax (Steinhauer, 1997). According to Consumers Union, "Nearly 9 million American families spend more than 10 percent of their income on health care." ("Even with insurance, health costs are high", 1998). In a 1997 White House Conference on child care, a Census report that low income families spend 25% of income on child care was cited (Pear, 1997). Wyett (1991) observed that state lotteries have a very regressive impact because low income consumers spend a higher portion of their incomes on lottery tickets than do high income consumers. Peirce (1989) cited a New Jersey study that found that "... nearly a third of families that live in poverty at under $10,000 a year spend about a fifth of their income on lotteries." The purpose of this paper is to provide simple examples from the BLS Consumer Expenditure Survey to demonstrate the possible pitfalls of using expenditure/income shares as evidence of regressivity.

One of the key facts to consider is that most low income households spend more than their current income. The simple explanation for this pattern is that household incomes can and often vary considerably from year to year. In order to stabilize their consumption levels, households may draw down their savings, borrow, or sell assets. Thus households could spend more than their actual household income. Under such circumstances, income can be an unreliable indicator of actual consumption levels for households that are less well-off. This paper discusses the income shares and expenditure shares of low income households using data from the 1990-1994 Consumer Expenditure Survey (CEX). After deleting households with incomplete income reporting and those with negative after-tax incomes, there were 15,180 households. There were 2,557 households with incomes under the poverty threshold. The mean levels of selected expenditures (not including pension contributions and FICA) as a percent of income (after taxes and FICA, etc.) were above 100% for many expenditure categories, including food, shelter, apparel, health, education, and tobacco. (For more detail, see the complete version of this paper at www.hec.ohio-state.edu/bls/). The mean values of the ratios were distorted by the ratio values of households with very low incomes, but even the levels of the 75th percentiles for income shares were above 100% for food and shelter, and at 44% for health. However, the budget shares (expenditure for a category divided by total household expenditures) were quite reasonable. For instance, the mean budget share for shelter for poor households was 22%, and the 75th percentile of the budget share for shelter was only 31%.

Consider a hot topic today, tobacco. For poor households, the mean of the ratio of annual tobacco expenditure to income was 129%, whereas the mean of the budget share was only about 2%. In the current discussions about raising taxes on cigarettes, there is obviously quite a difference in terms of impacts on the poor. Similarly, Consumers Union's discussion of the burden of health care costs would appear less dramatic if budget shares were discussed rather than expenditures as a percent of income. We are not suggesting that many low income households do not have problems with expenditure burdens for categories such as health care and shelter. However, more careful consideration needs to be made of the method by which a household maintains a high expenditure to income ratio, e.g., a retired household living from assets. Given limited public resources to help low income households, targeting of aid may be reasonable.

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Endnotes

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From the Melting Pot to the Stew Pot: A Study of Inter-Ethnic Variation in Food Expenditures

Geoffrey D. Paulin, U.S. Bureau of Labor Statistics[1]

Historically, the United States has been viewed as a receptive haven for immigrants, a place where persons from various nationalities, cultures, and socioeconomic backgrounds could come to live and work, ultimately to become Americans in some broad cultural sense. This is known commonly as the theory of the melting pot. But some may view this theory as too strong. For in a melting pot, individual characteristics can disappear, being completely subsumed into something new and different. Perhaps a more appropriate metaphor is America as a stew pot, in which, like ingredients of a stew, each immigrant group adds to the general flavor, and helps create a new product (American culture) that is unique in the world; yet the contributions of each group can still be identified separately, just as carrots and potatoes can be separated from the stew as a whole.

This study examines the metaphor in literal terms. That is, it examines how food expenditures differ for various European ethnic groups in the United States. Although others have studied cultural and ethnic groups such as Hispanics and non-Hispanics, no other papers found have explored the issue of European ethnicity and detailed food expenditures. Perhaps this is because many surveys that collect data on food intake or related issues do not ask about European ethnicity. However, the source of data for this study, the U.S. Bureau of Labor Statistics Consumer Expenditure Diary Survey, does collect such information.

This study is comprised of two parts. First, results from a survey directed by the author are examined. The survey is designed to ascertain what common associations might exist for food and ethnicity. For example, the results show a strong association of Italian ethnicity and pasta. The second part of the study examines actual expenditure patterns, first to see to what extent the associations are valid or invalid, and second to see what other information can be found; for example, do some groups make more healthful choices than others? Many interesting—sometimes surprising—results are found and described in the study.

Endnote

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Consumer Interests Annual *Volume 44, 1998*

Planning for Retirement: A Comparison Across Generations

Brian Riordon, U.S. Bureau of Labor Statistics[1]

Retirement is arguably one of the largest economic concerns that face Americans. Once retirement is reached, the paychecks from employment stop coming. Consumers must then rely on accumulated savings and Social Security to live in comfort the rest of their lives. Consumers also face new expenditures such as increased health care costs that were not as much an issue previously. Expectations on how retirement years will be spent influence how people prepare beforehand for life after employment.

Does each proceeding generation face an improved situation upon retiring, or will the Baby Boomers find retirement economically more difficult? How does their preparation compare to the previous generation s? While there may be fewer pensions today, there are increased numbers of 401Ks, IRA and stock market participation. But is this a product of fewer pensions? With this in mind, the question is examined as to how well prepared are Americans for retirement today.

To answer these questions, this paper examines various measures of economic well being pertaining to those closest to retiring, 55-64 year olds, in two periods, 1972-73 and 1994-95. Data from the Consumer Expenditure Survey (CE) are used to analyze incomes and spending patterns so as to measure how prepared today's near-retirees are for retirement, as compared to the generation before them.

Endnote

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The Effect of International Trade Agreements on the Consumer

Bruce Silverglade, Center for Science in the Public Interest[1]

Over the last few years, the Federal Trade Commission (FTC) has made a series of changes to its consumer protection rules in order to facilitate free trade between Canada, the U.S. and Mexico in accordance with the North American Free Trade Agreement (NAFTA). Today, I would like to review some of those changes and discuss their impact on the consumer.

NAFTA is making it easier for manufacturers to do business in Canada and Mexico. Many companies such as this one (Slide 1) have expanded their markets and are now selling their products throughout North America, as you can tell from the three languages on this label -- English for the U.S., French for Canada, and Spanish for Mexico.

One overlooked problem is that tri-lingual labels may make it difficult for some consumers to find important disclosures on the label. For example, the number of watts, lumens and hours that this bulb will burn are disclosed on this label, but are somewhat difficult to read due to all the various languages (Slides 2,3,4,).

Moreover, the English language instructions for the safe use of this product (Slides 5,6) cannot be found on the outside of this package; although they are listed on the bottom of the box in French. To find them in English, one must open the product and look for them on the inside flap. What is the impact on the consumer? The simple answer is that we don't know. It seems that these types of problems were overlooked when we entered into free trade agreements.

The rush to put different languages on a label so that the same product can be sold in various countries is somewhat ironic given that manufacturers, when faced with proposed disclosure regulations, often claim that the label is too crowded and that there is no space for the information, or that consumers will suffer from information overload. Such factors, however, do not seem to be a barrier when it comes to loading up labels with different languages. Perhaps it is time that we reexamine the Fair Packaging and Labeling Act to make sure that multi-lingual labels do not mislead consumers.

The Federal Trade Commission has actually been a willing participant in the drive to facilitate trade at the price of compromising traditional consumer protection regulations. Just last week, the FTC made it more difficult for consumers to identify what fabrics clothes are made of by permitting manufacturers to substitute international jargon for commonly known materials like Rayon or Spandex.

This dubious measure was first proposed in 1996 when the FTC, at the urging of the American textile industry, published amendments to its textile content labeling rules to allow the use of international fiber names in place of names commonly known by American consumers. The FTC proposal was solely to help achieve the goals of NAFTA. As the FTC put it, "manufacturers will have more flexibility in labeling products for both domestic and international sale."[2]

So, when an American consumer looks at a garment to see what it is made of, he or she will now see the term "Viscose" for the fabric commonly known as Rayon or the term "Elastane" for fabric commonly known as Spandex (Slide 7). These international terms, by the way, were developed by the International Standards Organization (ISO) -- an organization with little input from U.S. consumer organizations.

What is the impact on the consumer? Will the cost savings to manufacturers be passed on to the public? The FTC said that it "believes that consumers will not be harmed" by the use of international terminology." "Although the immediate result may be a few new and unfamiliar names on the label, consumers will learn these fiber names quickly."[3] That is quite an assumption. What is the real impact on the consumer? We don't know. Where is the cost/benefit study to back up this assumption? There isn't one.

Similarly, the FTC is making it more difficult for consumers to use energy labels on home appliances. The FTC's appliance labeling rule, in effect since 1980, is designed to help consumers comparison shop for energy efficient appliances. It requires manufacturers to attach to most major home appliances an "Energy Guide" label that provides an estimate of the product's annual energy consumption (Slide 8).[4] This requirement was also a consumer protection landmark of the last decade. Much work went into designing the label in order to facilitate its use by consumers.

In 1995, the Whirlpool corporation asked the FTC for permission to use a single, one-sided label showing the FTC Energy Guide next to, or above, the Canadian "EnerGuide" which is in French and English (Slide 9) and the "energy use" label required by Mexico which is in Spanish (Slide 10). Citing the NAFTA agreement, Whirlpool told the FTC that consolidation of the three labels would advance the cause of free trade.[5]

The FTC "observed that U.S. consumers may not be confused or misled by the presence of multiple appliance energy use labels because the FTC's energy guide is clearly identified as being based on U.S. government tests and is the only label of the three that is printed in English."[6] That may be true, unless of course you are a Spanish speaking American and think that the Spanish language label was put there as part of a good will effort to support bilingual disclosures.

What is the real impact on the consumer? We don't know. Where is the cost/benefit study? There wasn't one.

Perhaps the greatest disservice done by the FTC to American consumers in the name of free trade is the Commission's recent amendments to its textile care-labeling rule. The care-labeling rule, a vital consumer protection measure published in 1971, requires clothing manufacturers and importers to attach labels to garments giving full care and laundering instructions.[7]

For example, a knit sweater may have a label that says "machine wash warm, tumble dry low, use only non-chlorine bleach, do not iron,"(Slide 11). Simple enough. But in order to "reach more goals of NAFTA," the FTC amended its rules about a year ago to allow the use of international symbols for laundering.[8] The change, according to the FTC, will facilitate trade.

As you see, the FTC has made it very "simple" for consumers -- Here is what the new symbols look like (Slide 12). There are 5 basic symbols with several dozen variations, more than 40 in all! It's about as simple as learning a new alphabet.

Manufacturers are free to use the new international symbols -- the only catch was for the first 18 months they had to provide hang tags or other materials to explain what the new symbols mean. That educational requirement will expire soon and, we'll all be on our own. A simple error interpreting that railroad crossing symbol (a circle with an X through it), which means do not dry clean, could cost any one of us hundreds of dollars if a garment is accidentally ruined.

The FTC found that "(fabric) care symbols are used in many other countries, and presumably the symbols communicate the information they contain to the consumers in those countries."[9] What is the actual impact on consumers abroad and here in the US? The FTC doesn't know. Where was the cost/benefit study that is so often demanded before regulatory agencies take major actions? There wasn't one.

In closing, let me say that it is time we ask, "What is the true price of free trade?"
As leading researchers in the field of consumer protection, I encourage you all to find out. Let's examine consumer understanding of the new care labels, of tri-lingual energy guides, and new names for old fabrics.

In the past year, CSPI has committed itself to becoming active on international issues that affect domestic consumer policy. I encourage each of you to expand your efforts internationally as well. If I can leave you with just one thought, it is that the consumer community must become involved on a global level. This is no longer just work for international affairs specialists, but for each of us to integrate into our everyday activities.

Endnotes

1. Director of Legal Affairs.
2. Rules and Regulations Under the Textile Fiber Products Identification Act, 63 Fed. Reg. 7508, 7510 (1998) (to be codified at 16 C.F.R. pt. 300).
3. *Id*
4. Appliance Labeling Rule, 16 C.F.R. pt. 305 (1997).
5. Federal Trade Commission Press Release, *For Your Information...*, Feb. 22, 1996.
6. *Id.*
7. Textile Care Labeling Rule, 16 C.F.R. pt. 423 (1997).
8. Federal Trade Commission Press Release, *FTC Harmonizes Care Label Regulations with Canada, Mexico: Effort to Reach More Goals of NAFTA*, Nov. 14, 1995.
9. Trade Regulation Rule on Care Labeling of Textile Wearing Apparel and Certain Piece Goods, 60 Fed. Reg. 57,552, 57,553 (1995) (codified at 16 C.F.R. pt. 423).

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The Measurement of Household Wealth using Survey Data:
An Overview of the Survey of Consumer Finances

Survey measurement of household wealth faces some inherent difficulties: respondents may not provide financial information, values of assets and liabilities can be hard to report accurately, and ordinary random samples contain too few wealthy households to represent the full distribution of wealth. The Survey of Consumer Finances has a number of special features intended to promote accurate estimation of household wealth. This paper provides an overview of the SCF, including the sample design, response rates, information collected, and data quality and imputation.

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Introduction

To understand the economic circumstances of the population, it is important to collect information on household wealth. Wealth information indicates the extent to which households have savings to draw on in the event of unemployment or illness. It sheds light on the question of how well prepared today's working households will be to finance consumption during retirement. It provides indications of households' ability to service their debts, including their potential vulnerability to default or bankruptcy. It is also valuable for measuring inequality in the distribution of wealth, and for understanding its causes.

There are several reasons why the measurement of wealth through a household survey is inherently difficult. First, compared to other survey topics, respondents may be relatively reluctant to answer questions about wealth and income. Even when assurances of confidentiality are given, respondents sometimes have lingering concerns about the legitimacy of the survey or about the extent of its commitment to preventing disclosure. Second, values of assets and liabilities can be hard to report accurately. For example, respondents may not know the current market value of some of their assets, or they may forget to report some of their assets or debts. Finally, because the ownership of wealth is relatively concentrated, ordinary random samples are not likely to contain enough wealthy households to provide good representation of the full distribution of wealth.

The main U.S. survey collecting information on household wealth is the Survey of Consumer Finances (SCF). This paper provides an overview of the survey's content and methodology. The next section describes the various surveys conducted since the early 1960s. Section 3 discusses the sample design and response rates of recent SCFs. Section 4 summarizes the information collected in the survey. Section 5 covers data quality and imputation. Section 6 reviews the use of the SCF data in research on saving, wealth and other topics.

Background

Surveys of consumer finances have been conducted periodically since the early 1960s, under the sponsorship of the Federal Reserve Board of Governors.[4] While the surveys have differed somewhat in their sample designs and questionnaires, they have shared the objective of collecting detailed information on assets and liabilities from a nationally representative sample of U.S. households. Because the surveys have been intended to provide accurate descriptions of the current financial situations of consumers, the data are primarily cross-section in nature, although some panel data also have been collected.

The various surveys have differed somewhat in their samples and methodologies, so it is useful to summarize their main features (see table 1, which also provides a general reference for each survey). The first survey, called the Survey of Financial Characteristics of Consumers, collected information on consumers' financial situations in 1962. A follow-up interview collected information on changes in consumer finances between 1962 and 1963. Another wealth survey was not conducted again until the 1983 Survey of Consumer Finances, when 4,103 households were interviewed.[5] Some 2,822 of these households were reinterviewed by phone in 1986, using a shorter questionnaire. In 1989, the survey interviewed both new respondents and some respondents from the 1983 SCF. Two separate data sets were produced from the 1989 survey: a cross-section data set intended to provide accurate representation of the population as a whole, and a panel data set consisting of the 1,479 respondents to the

1983 SCF who were reinterviewed in 1989. The questionnaire used in 1989 was similar to that used in 1983, but with considerable revisions in some sections. Since 1992, the SCF samples have been cross-sections only, and the questionnaires have been very similar to that used in 1989, facilitating comparisons of the data across years.

Table 1
Summary of the Surveys of Consumer Finances

Survey	Sample size Total	List	General Reference
1962 SFCC	2,558	-	Projector and Weiss (1966)
1962-63 SCFF	2,165	-	Projector (1968)
1983 Cross-section	4,103	438	Avery, Elliehausen, and Kennickell (1988)
1983-86 Panel	2,822	359	Avery and Kennickell (1991)
1989 Cross-section	3,143	866	Kennickell and Shack-Marquez (1992)
1983-89 Panel	1,479	361	Kennickell and Starr-McCluer (1997)
1992 Cross-section	3,905	1,450	Kennickell and Starr-McCluer (1994)
1995 Cross-section	4,299	1,518	Kennickell, Starr-McCluer, and Sundén (1997)

Note: The 1998 SCF is scheduled to be fielded in the second half of 1998.

All of the surveys have shared two features that make them quite different from other surveys collecting information on wealth.[6] First, because a large share of wealth is held by a relatively small share of the population, the SCFs have taken measures to ensure adequate representation of wealthy households. All of the surveys have used dual sample frames, with a standard representative sample supplemented by a special sample of high-income taxpayers (see below). Second, the survey collects very detailed information on assets and liabilities. In a questionnaire that goes item by item through a list of assets and liabilities, the risk of forgetting to report an item is smaller than with a questionnaire referring to broad categories of assets or liabilities. This approach reduces tendencies toward underreporting, and also provides valuable information on the composition of household wealth.

Sample Design and Response Rates for Recent SCFs

Since 1989, the SCF has had a dual-frame sample design structured as follows.[7] The first part consists of a standard multi-stage area probability (AP) sample, drawn from a file based on Census records. At the first stage, the U.S. is divided into geographical units, which are stratified by population size, urban status, and region; then units are selected into the sample in a way that ensures national representation. At the next stage, smaller areas are selected, and a sample of dwellings is drawn. The main families living in these dwellings are the potential AP respondents.[8] The second part of the sample is a "list sample" drawn from a special file of tax records.[9] Information on asset income is used to compute a proxy for net worth; this proxy is used to stratify the file, and units are selected into the sample at disproportionate rates, with the sampling rate higher for the wealthier strata.[10] Together, the two parts of the SCF sample are intended to provide good coverage of both broadly-distributed items, like homeownership, and items that are more narrowly held, like businesses and bonds.

In descriptive analysis, sample weights can be used to make the data representative of the population as a whole.[11] The weights take into account both the complex sample design (for example, cases from high-wealth strata generally receive very small weights) and nonrandom aspects of nonresponse. In recent SCFs, the response rate has been around 70 percent for the area-probability sample, which is not unusual for a long cross-section survey. For the list sample, the share of cases eventually responding to the survey varies from 43 percent among moderately wealthy cases to 14 percent among the very wealthy, with the overall list rate around 34 percent.[12] The weighting procedure effectively scales up the weights of responding households to compensate for similar households that did not respond.

What Information Is Collected

Interviews for the SCF are conducted in person.[13] Because of the detailed nature of the survey questions, the interview takes an average of 90 minutes to complete, and can range up to three hours for households with complex finances. The interview is generally conducted with the financially most knowledgeable member of the household, although other household members may also provide information (for example, the respondent's spouse may be asked questions about his or her employment).[14] Respondents are encouraged to consult records, and 30 to 40 percent do.

The survey begins by collecting basic demographic information on all household members, including their age, sex and marital status. The respondent is then asked to list the financial institutions at which household members have accounts or loans, including the type of institution, the way of doing business with the institution and the distance between the institution and the home or workplace of the person who uses it most. As respondents describe particular accounts or loans during the course of the survey, this "institution roster" is used to identify the institution at which each item is held.[15]

The survey then goes on to collect detailed information on the household's financial assets, nonfinancial assets and liabilities. The section on financial assets includes checking, saving, money market, and call accounts; certificates of deposit; IRA and Keogh accounts; stocks; bonds; mutual funds; savings bonds; cash value life insurance; and trusts, annuities and other managed assets. For each item the respondent mentions, he or she is asked about its value and the institution at which it is held. Nonfinancial assets include the household's principal residence, investment real estate, vehicles, business interests, and other valuable assets like art and precious metals. Liabilities specifically mentioned in the survey include mortgages, home equity loans and lines of credit, loans for investment real estate, vehicle loans, student loans, consumer installment loans, and debt on credit cards. For each loan, the respondent is asked about the balance outstanding and other aspects of the loan's terms, including its duration, the interest rate, the typical payment, and the institution.[16]

In addition to the core questions on assets and liabilities, the survey also collects information on other topics relevant to understanding households' financial situations, including the employment and pension coverage of the respondent and spouse; household income and tax filing status; coverage by health, life and disability insurance; the educational attainment of the respondent and spouse; the health status of the respondent and spouse; experience in applying for loans in the past five years; recent problems making payments on loans; and attitudinal data on risk, borrowing and saving.

Future pension benefits are often not known in detail by respondents, but represent a potentially important financial resource. To obtain more information on pension rights, the 1983 and 1989 SCFs included supplemental "Surveys of Pension Providers," in which employers of households reporting pension coverage were contacted and asked for their pension plan's Summary Plan Description. The Summary Plan Description is a legal document describing the features of the pension plan, such as contribution information and calculation of benefits. The information from these documents was coded, and made available as a separate file that can be merged with the household data.

Data Quality and Imputation

An important problem in wealth surveys concerns nonresponse to questions about values of assets and liabilities. Questions about ownership of specific assets or liabilities usually have response rates around 99 percent. Questions about the values of salient items--like the value of the principal residence or the balance in the main checking account--also have reasonably good response rates, exceeding 90 percent. But for other items, response rates on value questions range between 70 and 85 percent. The lowest response rates occur for stocks, cash-value life insurance, and business interests--items often held as long term investments, and whose values are not regularly checked.

The SCF takes a number of steps to address problems of missing or incomplete information. Beginning in 1995, the SCF started systematically asking respondents to indicate a range when they were unable to provide an item's exact value.[17] In cases where respondents did not provide a value or range, the SCF imputes missing values using multiple imputation (see Kennickell, 1991).[18] In brief, each variable is imputed multiple times, using an iterative, multivariate procedure.[19] Compared to other imputation methods, multiple imputation has the advantage of preserving the second moments of the data, and providing a basis for measuring variance due to imputation.

Several studies have compared the SCF with other sources of survey data on wealth (for detailed comparisons, see Avery, Elliehausen and Kennickell, 1988; and Curtin, Juster and Morgan, 1989). According to these studies, the estimates of median wealth are similar across surveys, suggesting that the wealth holdings of the *typical* household can be characterized from shorter surveys without special sampling. However, there are two ways in which the SCF is quite different from other surveys. First, largely due to the improved representation of wealthy households, the estimate of mean wealth from the SCF is considerably higher than estimates from other surveys. By extension, the estimate of total wealth held by households is also much higher; indeed, total values estimated from the SCF generally compare favorably with aggregate data sources like the Flow of Funds, especially when differences in definitions are taken into account (see Antoniewicz, 1996). Second, compared to other survey sources, the SCF shows a somewhat different picture of the distribution of wealth. As would be expected, the SCF shows a larger share of households with high levels of wealth, and higher holdings for such households. But it also shows fewer households with low or no holdings, probably because the more detailed questioning elicits more reporting.[20]

Research Uses of the SCF

Household Saving

The SCF has played an important role in the analysis of household saving. From the SCF and other survey data, Bosworth, Burtless and Sabelhaus (1991) established that the 1980s decline in U.S. personal saving did not result from demographic shifts, but rather occurred for all demographic groups. Sabelhaus and Manchester (1995) compared the wealth of baby boomers with the wealth of their parents' generation at a similar age, finding greater wealth among boomers. Bernheim and Scholz (1993) compared actual age-wealth profiles with simulated profiles that would provide adequate saving for retirement. Gale and Scholz (1994) examined the effects of IRAs on household saving, finding some portfolio reshuffling but little increase in saving. Starr-McCluer (1996) and Carroll, Dynan and Krane (1998) used SCF data to examine precautionary motives for saving.

The SCF has also figured prominently in research on the effects of public and private pensions on saving. Using the 1962-63 data, Feldstein and Pellechio (1979) found a negative relationship between Social Security wealth and household savings. Subsequent studies have reexamined this issue, also covering the effects of pension wealth (see Gale 1998 for a recent contribution). Mitchell (1988) used the 1983 Pension Provider data to investigate worker knowledge of pension benefits, finding significant discrepancies between workers' and employers' descriptions of pension provisions. Starr-McCluer and Sundén (1998) have somewhat different findings, using the 1989 data.

Household Portfolios

The detailed information collected in the SCF makes it well-suited for studying the composition of household wealth. Several studies have examined the role of taxes in explaining how households structure their portfolios (Feldstein 1976a, Feldstein and Yitzhaki 1978, Scholz 1994, Poterba and Samwick 1996, and Maki 1996), while Poterba and Samwick (1997) look at lifecycle effects. Ioannides (1992) investigated whether changes in work status caused households to restructure their portfolios, finding few significant effects. Haliassos and Bertaut (1995) addressed the question of why so few households hold stock, despite apparent gains from the equity premium. Poterba and Samwick (1995) documented a broadening of equity ownership between 1983 and 1992, related to mutual funds and 401(k) retirement plans. Sundén and Surette (1998) examined the role of gender in the allocation of assets in retirement savings plans.

Borrowing and Liquidity Constraints

The SCF has also been used to study borrowing and liquidity constraints. Whereas most studies have measured liquidity constraints indirectly, Jappelli (1990) and Cox and Japelli (1993) analyzed information provided by households on their experience with credit rejections. Gropp, Scholz and White (1997) studied the effects of bankruptcy laws on households' use of credit. The SCF has also been used to try to explain why households borrow on credit cards, despite the high interest rates (Calem and Mester 1995).

Wealth Inequality

Finally, the SCF has been a main source of information on changes in the distribution of wealth. Estimates of wealth concentration depend importantly on sample weights: Whereas several earlier studies found an increase in wealth inequality in the 1980s, more recent analysis using updated weights suggests little change in wealth inequality from 1983 to 1992, but a significant increase in 1995 (Kennickell and Woodburn 1997).[21] Other studies have examined the role of pensions and Social Security in the distribution of wealth (Feldstein 1976b, Kennickell and Sundén 1997).

Getting the SCF Data

Data and documentation for the SCF may be downloaded from the Federal Reserve Board's website.[22] The SCF data are also available for member institutions through the Inter-University Consortium for Political and Social Research (313-764-2570) and for the general public through the National Technical Information Service (703-487-4763). The Pension Provider data can also be obtained through the Board's web site, ICPSR, or the NTIS. For questions about the survey, contact Gerhard Fries at the Federal Reserve Board, (202) 452-2578, or via e-mail at gfries@frb.gov.

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Endnotes

1. Statistician, Division of Research and Statistics.
2. Senior Economist, Division of Research and Statistics.
3. Economist, Division of Research and Statistics.
4. Several other federal agencies have provided valuable support for the survey. The Statistics of Income Division of the Internal Revenue Service has played an essential role in the sample design. The survey was conducted by the U.S. Census Bureau in 1962 and 1963, the Survey Research Center at the University of Michigan from 1983 to 1989, and the National Opinion Research Center at the University of Chicago since 1992.
5. Other surveys of the same name were conducted from the late 1940s through 1971, and again in 1977, but were primarily concerned with gauging consumers' buying intentions.
6. Other surveys containing information on wealth include the Survey of Income and Program Participation, the Panel Survey of Income Dynamics (1984, 1989 and 1994), and the Health and Retirement Survey.
7. See Kennickell, McManus, and Woodburn (1996) for additional discussion of the sample design.
8. At a given dwelling, the main family--or "primary economic unit" (PEU)--is the economically dominant single individual or pair of individuals (married or living as partners) and all other persons who are financially dependent on that person or couple. Almost all of the financial information collected in the survey refers to the PEU, although some questions are asked about the finances of secondary household members.
9. The file is made available by the Statistics of Income Division of the IRS under strict rules governing confidentiality, the rights of potential respondents to refuse participation in the survey, and the types of information that can be made publicly available.
10. Kennickell and McManus (1993) discuss the correlation between the wealth proxy and net worth as measured in the survey.
11. Most statistical software packages have options for computing summary statistics on a weighted basis. The sum of the sample weights equals the number of households in the U.S.: 93.1 million in 1989, 95.9 million in 1992, and 99.0 million in 1995.
12. Note that nonresponse reflects not only refusals, but also inability to get around the security and other barriers protecting the privacy of wealthy families. Before list respondents are contacted by interviewers, they receive a letter informing them that they have been selected as a respondent, describing the purpose of the survey, and explaining that the interview is voluntary and confidential. Interviewers also convey this information when they contact respondents in person.
13. Some phone interviews are conducted at the convenience of the respondent. Starting with the 1995 SCF, interviewers have used laptop computers to administer the questionnaire.
14. In the data files, data collected on the respondent and spouse have been mapped into variables for the "head" and "spouse," where the head may not be the same person as the respondent. In PEUs based on a couple, the "head" is taken to be the male, or the older individual in a same-sex couple. In other PEUs, the respondent is the head. The term "head" is purely a convention related to the organization of the data and implies no judgment about the structure of families.
15. For analysis of the institution data, see Elliehausen and Wolken (1992) or Kwast, Starr-McCluer, and Wolken (1997).
16. For analysis of the data on debt holdings, see Canner, Kennickell and Luckett (1995).
17. While respondents have long been able to select a range from a "range card," the use of computer- assisted interviewing permits more extensive range information. See Juster and Smith (1997) and Kennickell (1997) on the advantages of range data.
18. Multiple imputation has been used since the 1989 SCF. Each variable in the data file has a "shadow" variable that describes the original state of the variable, including whether it was missing for any reason. In 1983 and 1986, values were imputed using a variety of methods, including regression and hot deck.
19. Each variable is imputed as a function of variables with which it is likely to be correlated. Since 1989, the SCF data files have consisted of original records repeated five times, with each of these "implicates" imputed independently. To compute descriptive statistics, it is best to use all five implicates, dividing the

sample weights by five. Standard errors due to sampling can be computed using replicate weights (provided in a separate file), and standard errors due to imputation can be calculated from the five individual estimates from the implicates (see Kennickell, Woodburn, and McManus 1996; the SCF codebook provides details). For econometric analysis, it is common to use one implicate only, although in principle the standard errors should be adjusted for imputation to avoid biased significance tests. See Montalto and Sung (1996) for a useful discussion.

20. It is also important to note that the SCF's special sample design lowers the statistical variability of estimates of mean or total net worth.

21. The updated weights are computed on a consistent basis across survey years. Studies of wealth inequality that use the SCF data include Kennickell and Woodburn (1992), Wolff (1994, 1995), Weicher (1995, 1997), and Kennickell, McManus and Woodburn (1996), Diaz-Gimenez, Quadrini, and Rios-Rull (1997), and Quadrini and Rios-Rull (1997).

22. The Board's website is http://www.bog.frb.fed.us. To get to the SCF home page, select the option "Surveys" under "Domestic and International Research."

Practical Issues and Challenges from the Users' Perspective

Catherine P. Montalto, The Ohio State University[1]

The Survey of Consumer Finances is a very complex data set due to the sample design, multiple imputation of missing data, and issues related to confidentiality and disclosure. Since the 1989 survey, the questionnaire, sample design and imputation techniques have changed only marginally. This provides important "economies" to researchers in that knowledge and skill are highly transferable from one SCF to another from 1989 forward.

The survey employs a dual frame sample design. One frame is a standard multi-stage area probability sample of households in the U.S. The second frame uses a special list sample drawn from a sample of tax records that is intended to oversample households that are more likely to be wealthy. This complex sample design provides a more legitimate basis for estimates of narrowly-held assets and highly concentrated wealth in the U.S. However, this over sampling of households more likely to be wealthy means that data must be weighted to generate valid estimates for the U.S. population. Additionally, the data also include some highly influential observations that present challenges in empirical research.

Multiple imputation is used to handle data missing in the Surveys of Consumer Finances due to item non-response. The technique used by the Federal Reserve Board uses stochastic multivariate methods to replicate each original observation multiple times. Beginning with the 1992 SCF, the public data sets have contained five complete data sets, referred to as "implicates." The benefit to researchers is that the public data sets contain no missing values. The cost is that researchers must learn how to analyze data appropriately in the presence of five complete data sets.

Confidentiality and disclosure issues are related to protecting the identity of individual respondents. These issues are extremely relevant to the SCF because (1) the survey collects sensitive data on household assets, liabilities, and financial behavior, and (2) the survey oversamples households that are more likely to be wealthy. The related disclosure issues include determining what information will and will not be released in the public data set, as well as techniques used to adjust potentially identifying information. Because the SCF is sample survey data, estimates derived from the SCF data can contain error due to sampling. Due to the aforementioned confidentiality and disclosure concerns, standard methods of calculating sampling error cannot be used.

Now I would like to take these issues and place them in the context of "practical issue from the users' perspective". From the standpoint of empirical research, once we understand the theoretical and statistical issues, I think our questions focus on the "how to" and the "practical significance" of these issues, specifically determining how much our empirical results change when we account for these issues in our estimation.

Let me begin with sampling error. As previously mentioned, legal and ethical confidentiality issues prevent the Federal Reserve Board from releasing information related to the sampling frame that users need to implement any of the classical resampling approaches to estimation of sampling error. As an alternative, the public data set contains a set of replicate weights that can be used to derive estimates of error due to sampling. The Codebook for the 1995 Survey of Consumer Finances contains SAS code that can be used to derive these estimates.

With respect to multiple imputation and imputation error, the "how to" appropriately analyze data in the presence of five complete data sets is fairly straightforward. This method of inference, based on multiple complete data sets, is referred to as "repeated-imputation inference" (RII). RII techniques incorporate the variability due to missing values, or imputation error, in the variance estimates. SAS code for estimating imputation error of point estimates is provided in the Codebook for the 1995 Survey of Consumer Finances, and code for the use of RII in an OLS regression is available from the SCF Users Group Web page. For an easily understandable discussion of multiple imputation in the SCF from a user's point of view, refer to the Montalto and Sung paper that appeared in Financial Counseling and Planning in 1996.

Members of the SCF Users Group had a lively discussion about the appropriateness of RII techniques for nonlinear models. In order to resolve the multiple points of view within our group, we contacted Professor Donald B. Rubin at Harvard University, and author of the eminent book on multiple imputation. Professor Rubin confirmed that RII techniques are applicable to both linear and nonlinear models. The criteria for determining whether RII techniques are appropriate is independent of the functional form of the estimating equation. RII techniques are appropriate whenever the complete-data analysis inferences are based on estimates and standard errors. These estimates can include population means, variances, correlations, factor loadings, and regression coefficients.

The "how to" estimate sampling error and imputation error is fairly straightforward. The practical significance of these issues is also a very important question. The use of the replicate weights to estimate sampling error and the use of RII techniques to estimate imputation error are computationally intensive methods. These techniques require fairly large computer memory, and familiarity with computer matrix language. We do have some evidence of the relative importance of sampling error and imputation error in the context of population estimates, and of the importance of imputation error in multivariate analysis. Refer to the full version of this paper for more details.[2] Future research should carefully study and document the practical importance of imputation error in multivariate analyses.

The third empirical issue is related to weighting — specifically when to weight and when not to weight — and to influential observations. Because the SCF sample is not an equal-probability design, the final nonresponse-adjusted sampling weights should be used to produce point estimates and descriptive statistics that are generalizable to the U.S. population. However, even after weighting, influential observations often inflate estimates of means and standard errors of the mean. Researchers at the Federal Reserve routinely review calculations for the presence of overly-influential outliers, and apply robust techniques when appropriate. As researchers we need to increase our understanding of these techniques, including weight trimming and graphical analyses, and use these techniques appropriately in our analyses.

There seems to be less consensus on the role of weights in multivariate analyses. One camp argues that weights should be used in multivariate analyses, and the other camp argues that weights should not be used. The rationale for not weighting multivariate analyses is that if the strata defining variables used to construct the weights are controlled for in the multivariate analysis, it is not necessary, and possibly not appropriate, to weight. There are also issues related to whether the strata defining variables are endogenous or exogenous. If the weights are endogenous, weighted regression coefficients will suffer from simultaneity bias. From a users point of view, we need to understand what it means to "control for the strata defining variables" and how the strata defining variables should enter our models -- should they affect the intercept term only, or the slope coefficients as well? Clearly an important strata defining variable in the SCF is the wealth index strata used in the selection of high-income households.

Researchers can always think of variables or information they would like to have. I have constructed a "Wish List" for consideration by the Federal Reserve Board. (1) Disaggregate the race/ethnicity variable. The SCF collects information on the race and ethnicity of the respondent and spouse. Responses are recorded separately for six groups. However, in the public data set, Asian or Pacific Islander, Native American/Eskimo/Aleut, and Other are combined into one category. Thus, in empirical work it is impossible to separate Asian and Pacific Islanders from Native American/Eskimo/Aleut. This is disappointing, since many behaviors differ substantially between these two groups. (2) Ask individuals if they are covered by Social Security and include this information in the public data set. This will improve the accuracy with which we can estimate retirement income. While 95% of workers in the U.S. are covered by Social Security, 5% are not. And the retirement benefits available through State retirement programs are very different from those available through the Social Security program. Assuming that all persons are covered by Social Security will underestimate the retirement resources of persons covered by "generous" state programs, and in some cases the extent of this underestimation will be large. (3) If it is possible to simultaneously honor legal and ethical confidentiality issues, and to provide an indicator variable for rural or nonmetropolitan residence, analysis of the SCF data could enhance our understanding of the circumstances and needs of rural and small town communities.

The Survey of Consumer Finances is a rich source of information on assets and liabilities of U.S. households; it is also a very complex data set. The complexity arises from the sample design, multiple imputation of missing data, and issues related to confidentiality and disclosure. These complexities present abundant challenges to users of the data. Fortunately there is abundant information available to help researchers correctly and respectfully utilize the data to address important research questions.

References

Montalto, C. P. & Sung, J. (1996). Multiple imputation in the 1992 Survey of Consumer Finances. Financial Counseling and Planning, Vol. 7, pp. 133-46. URL http:/www.hec.ohio-state.edu/hanna/mltimp.htm

Endnotes

1. Assistant Professor, Consumer and Textile Sciences Department.
2. The full version of this paper is available at http://www.hec.ohio-state.edu/scf/cmacci98.htm

Consumer Interests Annual *Volume 44, 1998*

Cigarette Smoking by Children in Developing Countries: A Problem Whose Time Has Come?

This is an overview of my ACCI presentation which was promoted by the expectation of future health problems for children who smoke cigarettes in developing countries, and by the possibility that their smoking behavior has been encouraged by psychological influence techniques employed by marketers. Corrective measures based on psychological principles are suggested for coping with the influence techniques and for decreasing cigarette consumption in developing countries.

Monroe Friedman, Eastern Michigan University[1]

The attention of the U.S. Congress has been recently focused on the hazards of cigarette smoking. Of special concern have been the hazards for children, with legislators wrestling with the issues of appropriate controls on cigarette manufacturers and marketers. Although the discussion has centered on the health dangers to American children, a far greater problem exists abroad and especially in developing countries where cigarette sales are increasing very rapidly.

In this very brief overview of the problem, we skip over the health hazards of smoking along with the growth in cigarette sales for different regions of the world. We start by presenting the principal cigarette marketing practices that have been singled out for attention by critics:

1. Advertising in general, and children oriented advertising in particular.
2. Sponsorship of sports and entertainment events.
3. Hiring young women to distribute free cigarettes in bars and hotels, and at public events.
4. Providing free or low-priced promotional merchandise (e.g., T-shirts) to consumers with cigarette brand names prominently displayed on the merchandise.

How should developing countries respond to these various marketing threats to the health of their young people? Numerous corrective practices have been proposed by the critics:

1. Advertising initiatives (complete bans, partial bans, and counter-ads).
2. Health warnings (on packages and/or in ads).
3. Tax increases on cigarettes.
4. Bans on sponsorship of sports and entertainment events.
5. Bans on promotional merchandise.
6. Bans on distributions of free cigarettes.
7. Bans on smoking in public places.
8. Limiting access of minors to cigarettes (e.g., outlawing vending machines).
9. Mass media initiatives (discouraging smoking scenes in feature films and primetime television, and especially those scenes in which the hero or heroine is smoking).
10. Educational efforts (directed at smokers and non-smokers).

The pros and cons of these various initiatives were discussed in my ACCI presentation form psychological and sociological perspectives. Examples were given of actual initiatives taken by corporations, governments and educators to deal with cigarette smoking in children in developing countries.

Endnotes

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